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Every now and then we end up having an issue with a bit of a theme of an entirely unintentional nature and this month we've ended up with quite a few pieces about BMW's family of X cars – 4x4s, soft-roaders or whatever you might like to call them. We were fortunate enough to drive AC Schnitzer's fully-fettled take on the X5 M50d a couple of months back and following that we received invitations to the international launch of the X6 and to the UK launch of the X3. And to top it all the first pictures and information has just emerged on the new X5 M and X6 M that you can read about in our *News* pages.

Now, we know that some of you aren't all that enamoured with the 'Sports Activity' generation of machinery, but there's simply no getting away from them – customers love them – as witnessed by the fact that nearly every third new BMW sold around the world is an X machine. And in the 15 years since the X5 was launched – our first drive of the first generation machine was on the cover exactly 15 years ago this month – BMW has sold a simply staggering 3.3 million X cars. They might not conform to everyone's ideal of what a BMW should be but they have been a monumental success for the company.

Four-wheel drive technology has come on in leaps and bounds since BMW first dipped its toe in the water with the E30 325iX all those years ago and while the 'monster trucks' might not be your cup of tea you can't help but be impressed by the technology. Their twin-turbo V8s develop 575hp and 553lb ft of torque and can catapult them to 62mph from rest in an M4-rivalling 4.2 seconds. If that wasn't enough they're within a whisker of being as rapid as the M4 over the standing kilometre, too.

In fact, they're so fast, the poor old M5 that adorns our cover may not see which way they went! Truth be told, though, we'd rather be sitting behind the wheel of the iconic super saloon as for us it much better represents what BMW stands for than an X5 M. There's something that's so innately right about the E39 – from its superb proportions and subtle detailing to the sublime V8 under its bonnet. We don't want to shout it too loudly, but we also think they represent a bit of a bargain these days and while prices of good examples are on the up they're still eminently affordable. Yes, we know running costs will likely represent a small country's GDP but it won't depreciate – if anything it'll go the other way – and it's really not that difficult to make a good case of 'man maths' to get behind the wheel of one. I'd be sorely tempted if I hadn't just sunk every penny I possess into an E24 M635CSi!

Bob Harper, Editor



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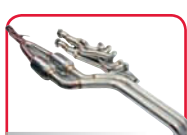


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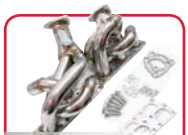
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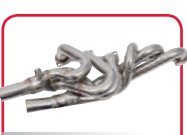
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# Hot X5 and X6 M models due in 2015

BMW's latest hot 4x4 M models have been revealed in all their glory as the X5 M and X6 M make their worldwide debut at the Los Angeles Auto Show. Naturally enough they're based on the F15 (X5) and F16 (X6) and BMW claims they bring big improvements over the outgoing E70 and E71 examples. Power is up by four per cent, torque and performance are all said to be boosted by 10 per cent, while economy and emissions have both been improved by over 20 per cent. Impressive stuff.

At the heart of these beats a twin-turbo 4.4-litre V8 that BMW refers to being 'new', but given it shares its capacity and bore and stroke with both the old X Ms and the F10 M5 we reckon it's probably closer to the truth to call it a 'revised' unit.

We probably shouldn't get too hung up on the semantics though as it does boast some impressive numbers; like 575hp at 6000-6500rpm and 553lb ft (750Nm) of torque available from 2200 to 5000rpm. That both machines will be quick is a given but a 0-62mph time of 4.2 seconds is impressive for something that weighs two-and-a-quarter tonnes and their standing kilometre time of 22.6 seconds is only half a second shy of what the M4 Coupé can manage. Top speed is electronically limited to 155mph (250km/h), although in some markets this can be boosted to 174mph (280km/h) with the addition of the M driver's pack as an option. On the EU test cycle the claimed economy and emissions figures are 25.4mpg and 258g/km, although in the real world we'd probably expect those figures would be a struggle to reach.

The twin-turbo V8 continues to feature BMW's innovative cross-bank exhaust manifolds to improve the unit's response and direct injection working up to 200bar and Valvetronic variable valve control also feature. The cross-bank exhaust manifold sends two converged streams of exhaust gas to the TwinScroll turbochargers through four separate exhaust ducts. The engine features a rigid closed-deck crankcase which permits the high fuel injection pressures necessary for it to achieve its power. A lightweight, torsionally stiff-forged crankshaft with low rotating masses helps sharpen the engine's responses.

As we've seen over the last few months the X5 and X6 Ms have been put through their paces on the Nordschleife – if they can make it there, they can make it more or less anywhere. The extreme lateral and longitudinal acceleration put upon cars when lapping the Nürburgring places high demands on an engine's oil supply, but sophisticated sump and suction snorkel geometry ensures that the X5 M and X6 M can generate up to 1.2 g without problems. Meanwhile, a combination of low- and high-temperature radiators ensures optimum cooling for the engine coolant, charge air and engine and transmission oil. Electronically controlled flaps within the exhaust system help provide a sporty soundtrack.

In the old models, power was transmitted via a six-speed auto 'box but these new generation of X Ms utilise the ZF eight-speed unit with M Steptronic and Drivelogic. BMW reckons this delivers all the advantages in terms of responsiveness of the M double clutch gearbox in other M models, with the

smoothness of a torque converter automatic. It also allows for a wider spread of gear ratios to foster greater fuel efficiency, and for the first time in a torque converter automatic it permits 'creep on demand' through the Low Speed Assistant system. The Drivelogic function allows the driver to prioritise fuel economy, comfort or sports performance, while gear changing can be automatic or driver-controlled via paddles on the steering wheel. A Launch Control function is fitted to permit perfect standing starts.

The xDrive four-wheel drive system is fully flexible in the way it distributes torque to each axle, to ensure maximum traction on all roads and in all weathers. Normally the bias is towards the rear to give the X5 M and X6 M maximum agility, but when the occasion demands, 100 per cent of engine torque can be sent to either axle.

Naturally enough the cars' chassis have been given extensive revisions to ensure they can cope with the extra power and torque and to give the sort of agility that M customers demand. They now deliver improved cornering force through revisions to the upper front wishbones, which have increased camber, camber progression and steering pivot axis, while directional stability has been increased thanks to revised elasto-kinematics with more rigid bearings. The X5 M and X6 M feature firmer suspension tuning than other X5 and X6 models, a 10mm lower ride height, Dynamic Drive active roll stabilisation and self-levelling air suspension at the rear. Dynamic Performance Control with Comfort,



Sport and Sport+ modes allows the driver to personalise the suspension settings at the touch of a button.

As standard, both the X5 and X6 M are fitted with 20-inch light-alloy rims – 10-inches wide at the front and 11.5-inches at the rear – with Pirelli P Zero tyres (285/40 and 325/35 front and rear respectively) and as an option, 21-inch wheels with Michelin Pilot Super Sport tyres can be fitted. The 21-inch items are identical in width to the 20-inches but come with 285/35 and 325/30 tyres. The X5 in the pictures wears the 20-inch items whereas the X6 has the optional 21s.

Steering is via an electronically assisted rack and pinion setup with M Servotronic and M specific gearing and tuning and stopping power is provided by six-piston front callipers and pads that have a 50 per cent greater surface area than on the old models.

Inside, the X Ms have been significantly upgraded from their regular production counterparts and feature a host of standard equipment. There are M front sports seats – electric, heated and with driver's memory – trimmed in fine grade Merino leather with contrast stitching, an M leather steering wheel with shift paddles, a leather-clad instrument panel and an Individual anthracite roof lining. Both models also feature Adaptive M suspension, DAB radio, M-specific Head-up display and the full Professional Multimedia Navigation system. Both models go on sale in the UK in April 2015 with on-the-road prices of £90,170 for the X5 M and £93,070 for the X6 M.





## BMW's stunning M6 GT3 race car

From the end of 2015, customers will be able to buy BMW's latest track weapon, its M6 GT3, which will replace the aging Z4 GT3 that has been at the forefront of its customer racing program since 2010. You might think that basing the new race car on something as big as the M6 is a little perverse but as BMW has a policy of only using a car in one race series it couldn't use the M4 as the basis for the new GT3 machine as the M4 is already its machine of choice in the DTM.

The heart of the BMW M6 GT3 is the 4395cc M Twin Power Turbo V8 from the production model and this unit has been modified specifically for racing while the chassis is being fettled for the specific demands of the race track in the BMW Motorsport workshops in Munich. The M6 GT3 will feature all the latest race technology such as racing gearbox, racing ABS and racing electronics.

"For me, as BMW Motorsport Director, there are few things more exciting than the development of a completely new car like the BMW M6 GT3," said Jens Marquardt. "The BMW Z4 GT3 has enjoyed success around the world in recent years, and is very popular among our customers. We obviously want to follow on from this success with the BMW M6 GT3. After all, the target we have set ourselves is to provide our customers with the best possible material. We also want to demonstrate the high product substance of BMW M cars in motorsport with the BMW M6 GT3. We are all very excited to see it in action at the initial tests. One thing is certain from the first design sketches: this car is going to have the wow factor. It goes without saying that we will continue to offer BMW Z4 GT3 customers our full support, just as they have come to expect from us."



## 15 years of X

This year BMW is celebrating 15 years of the X generation of Sports Activity Vehicles and since the arrival of the E53 X5 back in 1999 the company has sold an incredible 3.3 million X models worldwide and almost every third newly registered BMW is an X model. Production highlights include almost 620,000 first generation X5s, nearly 615,000 first generation X3 models, 730,000 second generation X5s and 260,000 first generation X6s. So far the E84 X1 has garnered 650,000 sales while the current X3 is running at 530,000 examples.



## BMW Group heading for a record breaking year

Overall sales of BMW, MINI and Rolls-Royce vehicles have continued to grow and the first three quarters of 2014 were the most successful in the company's history. A total of 1,529,880 vehicles have been sold in the year-to-date – up 6.5 per cent compared to the same period last year.

"As in the first three quarters overall, we've had a record September with growth in Europe, Asia and the Americas. This increase in sales come despite external factors continuing to influence a few individual markets," said Ian Robertson, Member of the Board of Management of BMW AG, Sales and Marketing BMW. "BMW i can celebrate several milestones this month: more than 10,000 BMW i3s have been delivered to customers this year and 341 BMW i8 customers have received delivery of their cars since sales began in the summer. The other new models we have launched in the last 12 months are also selling well and we are confident that the BMW 2 Series Active Tourer, which went on sale in September, will further boost sales. It's the most dynamic vehicle in its segment and will bring new customers to the BMW brand."

Global sales of the BMW brand in the first three quarters of 2014 rose 9.1 per cent on the same period last year with 1,319,492 vehicles delivered to customers.





## Limited Edition M4 DTM announced

Keen to celebrate Marco Wittmann's DTM Driver's championship success in fitting style, BMW M GmbH has unveiled the BMW M4 DTM Champion Edition. It will be built in a limited run of 23 units, reflecting Wittmann's car number. And – in a further tribute to the DTM winner – it will be offered exclusively in Alpine white. The other signature features of the special-edition model, which will be finished at the BMW Individual facility in Garching, will display close links with the victorious M4 DTM machine. The matt-black bonnet and bootlid with a stripe design complement the standard CFRP roof, as does the black character line along the car's flanks. Added to the mix are M kidney grilles with an orange surround, an M logo rearwards of the front wheel arches, the number 23 on the doors and the

flag along with 'WIT' and 'DTM Champion 2014' lettering on the rear side windows.

The BMW M4 DTM Champion Edition is also fitted with 19-inch light-alloy wheels, a black front splitter, a black side skirt blade, carbon front flaps, carbon mirror caps, a rear spoiler and a carbon diffuser insert from the M Performance Parts range. Inside, the door sill plates bear Marco Wittmann's autograph, while carbon interior trim strips – likewise signed by Wittmann – feature 'DTM Champion 2014' lettering and the car's serial number. Further interior highlights from the M Performance Parts range include the Alcantara steering wheel, Alcantara handbrake lever gaiter, carbon handbrake lever grip and carbon M DCT insert.



## First Brazilian BMW

In October, the BMW Group celebrated the first car to be assembled in its new South American automobile plant in Araquari in the Santa Catarina state of Brazil. Over the course of the next few years, more than 200 million Euros will be invested in the plant, resulting in a production capacity of more than 30,000 vehicles annually. The first car to roll off the assembly line in Araquari was a 328i 'ActiveFlex'. This car is specifically designed for the flexible use of either ethanol or petrol and thus meets the special requirements of the Brazilian market. The new site will create around 1300 new jobs; 500 new employees are already on board. Further jobs will be created within the supplier network of the new plant.

All construction on the production site is due to be completed by September 2015, by which time the site will also comprise a body shop and a paint shop. The facility will also include administrative and auxiliary infrastructure as well as logistic activities. The plant is scheduled to produce the MINI Countryman, F20 1 Series (five-door), F30 3 Series Saloon, E84 X1, and F25 X3.

The new BMW Group site covers an area of about 1.5 million square meters of which 500,000 paved square meters will be used for production. By adding a new plant in Brazil, the BMW Group is further expanding its global production network, which now includes 30 production and assembly sites in 14 countries on four continents.



## Leipzig plant milestone

It might be one of BMW's newest factories but the Leipzig plant celebrated producing its 1.5-millionth vehicle last month, less than ten years after it opened. The 1.5-millionth machine was an Alpine white 2 Series Active Tourer destined for a customer in Baden-Württemberg.

"I am very proud of our team. Almost ten years after the plant opened, we can already celebrate the production of the 1.5-millionth vehicle," said Dr Milan Nedeljkovic, head of the BMW plant in Leipzig. "For the future, we are well positioned to continue the success story of the Leipzig plant together with our employees." Every day the 4000 staff at the Leipzig plant produce 750 vehicles including the 2 Series Active Tourer, the 2 Series Coupé, the X1 and the 1 Series as well as the recently-introduced i3 and i8 models.



## M rumours

As always, the internet is awash with rumours about the future M cars and the stories currently doing the rounds revolve around the M2, the M4 GTS and a potential high performance version of the i8. Working in chronological order we know that an M2 will be coming out and are expecting a machine very much in the mould of the 1 Series M Coupé which will mean a skilful amalgamation of regular production components and those found on the M3 and M4. We're not expecting a version of the M3/M4 engine under the bonnet though, instead the car will use a tweaked version of the M235i's unit with an expected output of around 370hp. Many chassis parts will be taken from the M3 and M4 while we're expecting the body to be a moderately sanitised version of the one fitted to the M235i Racing. There is plenty of discussion over the car's gearbox though and one theory is that it will, like the 1M, only be available with a manual 'box to avoid M2 sales impinging on those of the M3 and M4 which are almost exclusively being ordered with the M DCT transmission.

M4 test mules have recently been seen circulating the Nordschleife wearing BMW Safety Car logos but this minimal disguise has failed to stop us from concluding that these are actually M4 GTS test cars. When we were on the launch of the new M4, BMW M's Albert Biermann more or less confirmed that there would be a replacement in the pipeline for the much-loved E92 M3 GTS, but this time we're hoping the car will have a slightly less stratospheric price and be built in greater numbers.

The last rumour concerns BMW's plans for its centenary in 2016 with many commentators reckoning that a high performance version of the i8 might be in the offing. Rumours range from a M5 V8-powered version to one equipped with the M4's twin-turbo straight-six. Either would be a tantalising prospect but we reckon if this supercar does ever appear it will still utilise the i8's hybrid drivetrain although it's possible the three-cylinder unit will be replaced by a more powerful four-cylinder unit and be coupled to a higher output electric motor. Time will tell...



## M1 ProCar rejuvenated

Japanese entrepreneur and president of the BMW Clubs Japan, Masakuni Hosobuchi, has added this stunning M1 ProCar to his collection of BMW M Cars when he collected it from BMW Welt in Munich. The 'Yes to the Nürburgring' ProCar is painted with the traditional race track in the Eifel and shows the connection between BMW and the old Nürburgring. Nelson Piquet and Hans-Joachim Stuck achieved a class victory and third overall with this car in 1980 at the 1000km race at the Nordschleife.

The unique car was restored over several years by the customer workshop of BMW Group Classic and the experts at BMW M GmbH and is now in as-new condition.



## Ultimate driving at Goodwood

Goodwood has launched a new Ultimate Driving experience powered by BMW which gives you the chance to hone your skills behind the wheel with expert tuition and have an off-road adventure on an authentic 32-mile course that takes in the whole of the 12,000 acre Goodwood Estate.

Four key components make up Ultimate Driving At Goodwood; Adventure, Performance, Academy and Ultimate, all of which will be available to individual customers and groups.

Adventure pitches you head-first into nature at its rugged best as you drive X5 and X3 machines across Goodwood's Estate. Performance puts you behind the wheel of the M235i, M3, M4, M5 and M6, plus the Alpina D3 Bi-Turbo with expert one-on-one tuition from Goodwood's team of highly-experienced instructors. Academy gives those under the age of 17 the thrill of getting behind the wheel of a MINI Cooper for a drive around the historic Motor Circuit, while Ultimate gives visitors to Goodwood the chance to tailor their full-day experience to suit their own needs, combining the very best elements of Performance, Adventure and Academy.

For more information see [www.goodwood.co.uk](http://www.goodwood.co.uk)



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## Alpina C2.5 convertible model

This month's model to keep those with an empty shelf happy is the E30 Alpina C2.5 convertible by Corgi models. Finished in red with some nice detailed features, the 1:43 scale die cast model should fit into any model collection nicely.

**Price:** £22.99

**Contact:** [www.diecastlegends.com](http://www.diecastlegends.com)



## E70 X5 and E71 X6 uprated bushes

UK-based polyurethane bush supplier Powerflex is continuing to expand its popular range by now including the E70 X5 and E71 X6 models. There are eight bushes in the range to cover the front radius arms to chassis bushes and front and rear subframe mountings. There are also five anti-roll bar mount options to cover all sizes and types including the active items fitted with the Dynamic Handling package. All bushes come with a lifetime warranty and the even stiffer Black Series is also available.

**Price:** From £21.54

**Contact:**

[www.powerflex.co.uk](http://www.powerflex.co.uk)



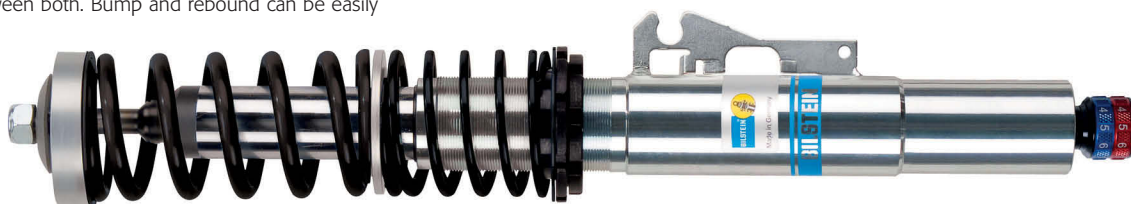
## Bilstein Clubsport coilover kit for M4

It didn't take long for tuning companies to get their teeth into the new M4 super coupé and this month, suspension guru Bilstein offers up a new coilover kit. The finely engineered piece of kit is designed for both fast road and race use and offers the adjustability to balance between both. Bump and rebound can be easily adjusted with no specialist tools using the thumbwheels that offer ten levels of adjustment. Height is also adjustable from -30mm to -55mm to suit the track or personal preference. A lightweight version of this kit has

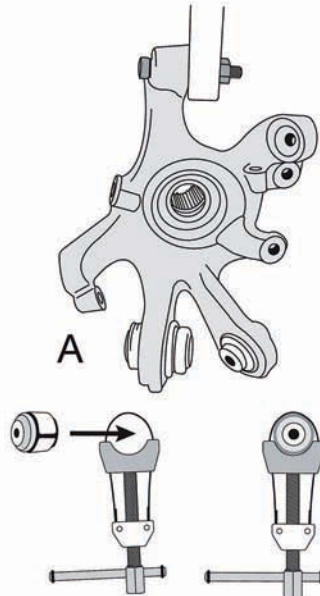
been spec'd by the factory for race teams so you know it's top quality.

**Price:** TBA

**Contact:** [www.bilstein.de](http://www.bilstein.de) or call 01162898345



## E8x 1 and E9x 3 Series bush removal tool



Laser Tools has been developing a new series of tools to make the task of removing and installing bushes easier. Its new addition caters specifically for the rear lower control arm suspension bushes of the E8x 1 Series and E9x 3 Series range. It allows the bush to be extracted quickly and easily and comes supplied with instructions. It also includes a split bush compressor tool that is required to ensure correct fitment of the original BMW split bushes.

**Price:** £321.81 **Contact:** [www.toolconnection.co.uk](http://www.toolconnection.co.uk)

## Ring pre-set air compressor



Market leader Ring Automotive has now launched a new air compressor that features a handy pre-set function. This allows you to set a maximum air

pressure before starting, meaning you don't need to keep such a close eye on the gauge and can let the compressor do it for you. It's available with either an analogue or digital read out.

**Price:** From £29.99

**Contact:** [www.ringautomotive.co.uk](http://www.ringautomotive.co.uk)





7° tapered voidings to allow arm to follow natural arc

## M3/M4 Eibach lowering springs



Suspension supremo Eibach has been busy developing a new range of parts for the current M3 and M4 models. First of all comes a lowering spring kit that improves the look and lowers the centre of gravity in order to improve handling further. These are matched to the factory dampers and the progressively wound spring allows for good ride comfort whilst improving stiffness. The kit lowers the car 20mm at the front and 5-10mm at the rear. The M4 Convertible is also covered but it uses a different part number and lowers the car 20mm at the front and 15mm at the rear.

Price: £234.99

Contact:

www.eibach.com  
or call  
01455 285851



## Sport exhaust for F3x 335d and 435d

Leading German tuner Kelleners has released a performance exhaust upgrade for the latest 335d/435d. Designed for the xDrive models, it will fit all versions including the F30, F31 and F32. The entire system is made from stainless steel and consists of a centre pipe and a rear silencer with a choice of four stainless-steel 80mm or 100mm tailpipes. Essex-based M-Style is Kelleners' official UK distributors so contact the team there for details and fitting.

Price: £2417.86

Contact: www.mstyle.co.uk/0208 5989115



## M3/M4 Eibach uprated anti-roll bars

Also new from Eibach for the current M3 and M4 models this month is a complete uprated anti-roll bar kit to replace the original. The kit is made up of two bars for the front and rear and the front bar features Eibach's innovative hollow construction allowing a large weight saving. The bars also offer two-way adjustability to suit the driver's preference.

Price: £375.99

Contact: www.eibach.com or call 01455 285851



## Spoiler alert.

Prices have been reduced on many of our premium quality carbon fibre components including front spoilers and rear diffusers for M3, M5 and M6. We also have a new range of carbon fibre products for the M235i including front spoiler elements (shown here) and a quad pipe rear diffuser. See our website for details, or call us for your nearest AC Schnitzer dealer.

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Model shown M235i (F22). 0% finance on upgrades available subject to status. E&OE.

## DTM Championship winning celebratory watch

BMW Motorsport's premium partner Ice Watches has chosen to celebrate its sponsored BMW M4 winning the 2014 DTM championship with Marco Wittmann behind the wheel by releasing a new range of watches. There are two styles to choose from; either the simple Classic or the Chrono, which features three extra dials in the centre. The watches come in either navy blue or white and all encompass the classic BMW logo and contrasting coloured hands. There is also a combination of sizes to choose from and the watches can be ordered from a variety of popular outlets.

**Price:** From £70

**Contact:** <http://uk.ice-watch.com>



## F10 M5 carbon engine cover

If you own an F10 M5 and want to spruce up the underbonnet looks then this new carbon fibre engine cover from afe would be ideal. It's hand-crafted and made from 2x2 twill weave carbon, finished with a high gloss clear coat while the underside has been smoothed to insure a high-quality all-round finish. The original M badge and rubber grommets can be easily removed from the factory cover and reinstalled on to the carbon one to complete the look.

**Price:** £549.81

**Contact:** [www.ca-int.co.uk](http://www.ca-int.co.uk) or call 01202 822792



## E9x M3 carbon air box

For those M3 owners willing to fork out on something that looks fantastic under the bonnet and potentially releases another 5-10hp then look no further than the Type 2 carbon air box by Goke. Not only does it do all that but it also increases induction noise thanks to the resonating qualities of carbon fibre.

**Price:** £2097.56

**Contact:** [www.ca-int.co.uk](http://www.ca-int.co.uk) or call 01202 822792



## Imperial Wax products

Although it's a new brand to the market, having a history that dates back many years shows the guys at Imperial Wax know what they are talking about. After a lot of hard graft it has redesigned its whole image to bring Imperial Wax into the 21st century. With a line-up of good value and high quality products, the brand looks set to go far. You can even use the promo code BMWCAR5 on its website for 5 per cent off!

**Price:** From £6.99

**Contact:** [www.imperialwax.co.uk](http://www.imperialwax.co.uk)





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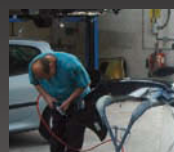
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# Revamped & Refined

**The new face-lift X3 is here but it's not the looks we're interested in, it's the introduction of a new range of diesel engines that really caught our eye.**

Words: Simon Holmes Photography: BMW

It may not look like it and it really doesn't feel like it either, but the current F25 X3 is nearly four years old. So, as tradition dictates, BMW is celebrating the occasion in the best way it knows how: by treating the model to a face-lift, better known as a Life Cycle Impulse (LCI).

As usual for this kind of freshen up, the exterior styling differences are small, subtle and localised. The kidney grilles and accompanying surrounds are a little longer and larger, the headlights now feature a new twin circular design and both the front and rear bumpers have developed a new set of contoured curves. Even more subtle is the change of location for the LED side repeaters. They're now housed in the door mirrors. And let's not forget the one centimetre overall length increase, too. As we said, it's subtle stuff, as we now expect from an LCI.

Elsewhere, though, there have been other more important changes. To start, the standard specification has been improved and extended to push the X3 firmly up a notch in its class. It now includes Business



sat nav, heated front seats and an automatic tailgate. That little bonus pack accompanies the already-standard fit Nevada leather interior, dual-zone air-con, cruise control, DAB radio, Bluetooth, USB connectivity, 17-inch alloys, front and rear PDC, Drive Performance Control, rain sensor and automatic headlights – creating a pretty wholesome package. It seems the baby X3 is following in the footsteps of its big brother, the X5, and heading positively upmarket.

Prices start at a not-so-X5-like £30,995 for the basic sDrive18d SE and, joining the more detailed standard specification, a new trim level has also been added to the range. The xLine fits in above the SE and below the M Sport to fill in the middle ground, although to slightly confuse things there is now also an SE Plus package that gains an uprated Harman Kardon stereo, Sun protection glass, Adaptive headlights, 18-inch alloys and High-Beam Assistant for a reasonable £2,850 over an SE. Then comes the xLine with gleaming metallic bumper inserts, Satin Aluminium side cladding within the air intakes, simulated under-

guards at the front and rear and exclusive 18-inch alloys. Inside, there's exclusive xLine leather interior, Dark Copper trim, together with a Sport leather steering wheel. That little lot costs an additional £1500 over an SE.

After that comes the range-topping M Sport, which features the aero styling kit, Individual high-gloss Shadow line exterior trim and newly upgraded 19-inch light alloy wheels to replace the pre-LCI's 18-inch versions. Inside, there's Individual Anthracite headlining, Sport seats, an M Sport leather steering wheel and Brushed Aluminium trim finishers. Finally there's Performance Control and M Sport suspension. The price is an extra £1500 over an xLine. Again, there's an optional M Sport Plus package that, for £2920, gets you 20-inch M Sport bi-colour alloys, Xenon headlights, Sun protection glass and a Harman Kardon stereo.

Aside from the new styling and trim level additions, there are a number of other significant changes, or introductions rather, to the X3. As before, the UK

market is purely made up of diesel variants and the previous ageing engines have now been replaced with BMW's latest TwinPower Turbo technology to bring it in line with the rest of the range. Power and torque is up on every model, some more than others. The entry-level sDrive18d now produces 150hp and 265lb ft of torque, followed by the 190hp and 295lb ft xDrive20d. Then comes the 258hp and 413lb ft xDrive30d before the monstrous 313hp and 464lb ft xDrive35d. Fuel consumption and performance have both marginally improved across the range in accordance with the power and torque increases but the main issue with the older diesels (particularly the four-pots) was their lack of refinement. They were quite coarse units that delivered their power with an unrefined bang, much like the older engines did, so these new smaller diesels are a welcome addition.

With that in mind we chose to get behind the wheel of an entry-level sDrive18d SE and on the opposite end of the spectrum, a range-topping xDrive35d M Sport, priced at £45,395 giving a





difference of £14,400 between the two.

First up is the 18d, powered by the mildly detuned 2.0-litre turbo diesel it shares with the 20d. In this guise it covers 62mph from rest in 9.5 seconds with the more popular eight-speed automatic (which is what we have here) or 9.8 seconds with a six-speed manual. Top speed is 121mph and combined fuel consumption of 56.5mpg is supposedly possible with emissions of 131g/km. Outside, the styling looks just as subtle as it sounds on paper, although the front end has gained a notably more aggressive outline. Inside, there's not much of a change in the look or feel of things but the sat nav screen and trim finishers help to break up the black plastic. The high-quality screen and accompanying smaller fixtures and switchgear fittings also help bring an air of quality and class to it.

The important bit here is the engine, though, and out on the road it instantly becomes clear how much of an improvement the new unit is. It's gained 9hp and 32lb ft of torque over the last model but the power is very linear, very refined and very smooth. It's a far cry from the previous, gruff engine and although it's lost that aggressive punch of torque the new unit delivers a softer wave of constant power instead. It feels more effortless for that reason and it picks up and covers ground quickly. It's flexible, too, as a

majority of the torque arrives around the 2000rpm mark. It's helped by the as-ever sublime eight-speed automatic that compliments the new engine's characteristics well and it shifts easily between the 3000rpm mark on an easy drive to 4000rpm when you hold it out. At those kinds of revs it makes a typical diesel clatter but it's certainly toned down compared to the older engines and, generally, it's a quiet unit. Fuel consumption wise, keeping to a steady pace sees figures of high 40s or more if you're being relaxed. Start-stopping massively decreases the figure, though, and moving off from a start a few times will see the figure drop but still manage a respectable average in the low to mid 30s.

The lack of xDrive in this two-wheel drive model is barely noticeable, although traction control does engage when pulling out of a junction in the wet.

The xDrive35d is an altogether different beast but thanks to the permanent xDrive it doesn't suffer from any traction issues. The new model has 4hp more than the old model and the same torque yet the 0-62mph figure has dropped by half-a-second to a lightening quick 5.3 seconds. On the road it feels just as fast as the last version, though a little livelier, but, like the four-pot, it's definitely smoother and more refined. Again, connected to the eight-speed gearbox

it's an unbeatable combination and it's able to easily devour sections of B-road with very little effort as there's always plenty of torque on tap. Whereas it was possible to catch the 18d off-guard if the gearbox allowed the revs to drop too low, requiring a kick down to bring it back on song, the 35d is never left out in the cold. Its huge wave of torque is large and ferocious.

But despite this, it's the 35d that is actually less impressive compared to the 18d in some ways. Its performance is utterly stunning but then it already was beforehand. For that reason it's the new four-pot diesel that is the star here. It's a welcome addition to the X3, as are the LCI updates that help bring up the rear of the range. Although the changes may be subtle, it all adds to the bigger picture and helps the X3 fend off its rivals in a closely fought market.

BMW expect the 20d to make up 75 per cent of total X3 sales based on previous results and the old engines were undoubtedly hindering the X3. The new engines are more usable, practical and offer accessible power that's easy to administer. This will give the X3 what it needs to complete the package and make the car feel fresh for another four years or so until the new model arrives, which is exactly what it's supposed to do ●





## F25 X3 LCI

	F25 X3 xDRIVE18d	F25 X3 xDRIVE35d
<b>ENGINE:</b>	Four-cylinder, turbocharged	Twin-turbo, straight-six
<b>CAPACITY:</b>	1995cc	2993cc
<b>MAX POWER:</b>	150hp @ 4000rpm	413hp @ 4400rpm
<b>MAX TORQUE:</b>	263lb ft @ 1500-2500rpm	464lb ft @ 1500-2500rpm
<b>TOP SPEED:</b>	121mph	152mph
<b>0-62MPH:</b>	9.5 seconds (9.8)	5.3 seconds
<b>ECONOMY</b>	56.5mpg (55.4)	47.1mpg
<b>EMISSIONS:</b>	131g/km (143)	157g/km
<b>PRICE:</b>	£30,995	£45,7395

*Figures in brackets for manual version*





## As the motorsport season draws to its close we look back at the highs and the lows from the BMW perspective

The evenings are drawing in and the tabloid press is scaremongering about the hardest winter for 30 years coming our way. All this can only mean one thing – we're hurtling headlong towards the end of the year which means, for the vast majority of us, motorsport will be going into hibernation for a few months. So what better time than to look back at how the season went for BMW?

As far as factory involvement was concerned, BMW had a bit of a two-pronged attack this year with the Z4 endurance racer and the M4 DTM machine. We'll tackle the latter first as we've known for a couple of months now that Marco Wittmann took the DTM title in his Ice Watch M4 DTM machine with two rounds of the season left to run. While we might not really feel all that involved in the UK with the DTM championship, especially now that the Brands Hatch round has been dropped, Wittmann's achievement shouldn't be underestimated. He accrued 156 points on his way to winning the title – 50 more than his nearest challenger (Marcus Ekström in an Audi) – and a massive 107 more than the next BMW driver, Schnitzer's Martin Tomczyk. Thanks to support from his Team RMG colleague Maxime Martin, BMW Team RMG was able to dominate the Team championship beating Audi Sport Team Abt Sportsline by 65 points but the overall poor showing by BMW was reflected in the Manufacturer Championship which went to Audi. So, ultimately a good season – driver and team gongs aren't to be sniffed at – but overall BMW will have wanted the manufacturer's crown first and foremost so there will be plenty of work to be done in the closed season.

The Z4 GT3 also had a mixed bag of results and as

we've seen during the course of the season, BMW has found it tough in endurance racing this year. The Z4's failed to win at the Nürburgring and Spa 24-Hour races, being soundly beaten by Audi's R8 at both events and while there's obviously a large element of luck involved in triumphing in 24-hour events it's disappointing that the Z4s haven't managed this feat after three years of trying. Perhaps we expect too much of BMW, but when you've won very nearly half of all the Nürburgring 24-hour races people come to expect more wins!

In North America where the Z4s were campaigned by BMW Team RLL in the GTLM class of the inaugural Tudor United SportsCar Championship it was a case of more of the same with the Z4s ultimately failing to make their mark on the championship. Dirk Müller and John Edwards were seventh in the driver's title race with Andy Priaulx and Bill Auberlen eighth, Team RLL was seventh in the Team championship and BMW was fourth (out of five) in the Manufacturer championship. And to make matters worse there wasn't a single BMW win all year in the GTLM class.

It wasn't all bad for the Z4, though. In the same championship where the factory cars struggled, the privateer team of Turner Motorsport waved the BMW flag to good effect in the GTD class by winning the Driver and Team title. Given it was the only BMW in the class the Turner team did a great job of beating off the challenge of ten 911s! Sadly Turner won't be defending its crown in 2015 as it will be moving its focus to the Pirelli World Challenge GT where it will be able to run its Z4s in full GT3-spec, instead of this year's lower downforce and less high-tech GTD guise.

It would seem that part of the problem facing the Z4 is down to the Balance of Performance

regulations. This is the way the organisers try to equalise the performance of each GT3 machine to ensure an equal footing on track. Each car's lap time is compared and if it seems one car will be quicker than others it can be penalised by adding weight or fitting a smaller air restrictor or fuel tank and this seems to be adversely affecting the Z4. Its qualifying pace is electric thanks in the main to its stunning cornering speed but in a straight line its pace is a fair bit slower than other cars. So while it's undoubtedly very quick over a single lap, in a race scenario it's unable to use its cornering advantage to good effect as most overtaking is done at the end of the straights where it doesn't have the pace to reel in its competitors. Maybe with the new M6 GT3 (see News) that's being developed for the 2016 season BMW will concentrate more on straight-line speed and less on outright cornering pace?

Returning closer to home, the big news in Great Britain was eBay Motors' success in the British Touring Car Championship with Colin Turkington bagging the title at the last weekend of the season at Brands Hatch. It was a stunning achievement for him and his 125i M Sport. The West Surrey Racing run eBay team won the Driver, Team, Independent Team and Independent Driver titles in a sensational season but even as the dust settles it would appear that there will be some fiddling with the rules for 2015 to try and placate the other teams in the BTCC who reckon the rear-wheel drive BMWs have an unfair advantage.

Whatever happens we'll be back with our Motorsport coverage in 2015 where we hope Turkington will be able to defend his title in the BTCC and the Z4 might be able to win at the 'Ring in its final season. Roll on the New Year! ●



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# Forum Fanatic

**When Kalim Moghul first bought this 325i he never envisioned that it would one day be running M3 power. Fortunately his internet forum friends inspired him to do just that...**

**Words: Simon Holmes Photography: Richard Le**

Car-based internet forums have a lot to offer (and answer for) when it comes to project cars. Aside from some often amusing bickering, the busy, active communities can also offer reassuring support or helpful advice. But perhaps most importantly of all, they offer inspiration... and that can make you do strange things. That's certainly something American-based Kalim Moghul can relate to, as this finely finished four-door E46 featuring M3 running gear and a whole host of tasty additions

started out as a completely standard 325i automatic when he first bought it. And his plan was to keep it that way. Needless to say that plan has well and truly been scuppered in favour of building something a lot more fun and unique and it's mostly down to his friends on the E46fanatics.com forum.

It all started for Kalim about eight years ago when he decided to treat himself to a new car to use at weekends. This was his first foray into BMW ownership and the brand was just what he was looking for, as he explains: "I was initially attracted to



## S54 E46 four-door

**ENGINE & GEARBOX:** S54B32 with OEM CSL air box and CSL engine management, Schrick 288/280 cams and DLC followers, E46 M3 Euro headers and exhaust with Magnaflow muffler, E46 M3 Getrag six-speed manual, UUC 8.5 lightweight flywheel, Stage 2 organic clutch, E46 M3 3.62 limited-slip differential

**CHASSIS:** KW Variant 2 coilovers, M3 front and rear suspension linkage, BMW Performance carbon fibre strut brace, Powerflex urethane bushings

**BRAKES:** Alcon/Stasis Mono6 365mm front BBK

**WHEELS & TYRES:** BBS Motorsport GT4 RE 9.5x18-inch, Falken FK-452 255/35 R18 tyres

**INTERIOR:** M3 instrument cluster, ZHP shift knob, M3 steering wheel

**EXTERIOR:** M-Tech II Aerodynamic kit, BMW Euro Clear turn signals, black kidney grilles, 332i badge

**THANKS:** Thanks go to my friends who helped me get the car to where it is today, to Europrojektz, a great show team and even greater partners in crime and to the many friends from E46fanatics.com



the combination of sportiness and luxury. BMW also had a reputation for being a driver's car, which is what I was looking for in a weekend cruiser."

Selecting exactly what car to get was a carefully considered process for Kalim but he eventually narrowed it down to a six-cylinder E46. He didn't want the Coupé, instead he hankered after a Saloon or Touring for their added practicality and the 325i seemed to be an ideal balance of performance and efficiency. So when his mind was finally made up to buy he then spent a week finding suitable cars for sale locally that fitted his detailed criteria. For a start, he wanted a one-owner car with an accident-free

history and nigh-on perfect paintwork. "I spent the entire weekend driving over 30 different E46s, but I came back to the very first one I had found," he reveals. "It was not a colour I had originally considered but it was spotless inside and out, completely unmodified, came with BMW's extended warranty and looked fantastic, so I drove away happy."

That car is the one you see here and Kalim has cherished it ever since. It also inadvertently spawned an appetite for BMWs that has carried on for the last eight years, too! A year after the E46 he bought a modified 1989 E30 325i to use as an everyday car and for Autocross events, which he still uses today

and some 18 months after that he bought an E46 M3 project in need of a new engine. After some research he repaired it and used it as his winter car. It didn't stop there, either, as well and truly bitten by the BMW bug Kalim had now developed a hankering for M power, too. So, a couple of years ago, he picked up an E36 M3 Saloon in Estoril blue, which remains the only BMW he's ever sold! Then, last year, came another E46 M3, this time a one-owner example finished in rare Phoenix yellow, although Kalim admits he's not actually had much time to drive it.

The reason for his lack of free time is no doubt related to this car, his original 325i and the one that



**“I was nervous on the day of the first start. A big group of friends showed up to watch...”**

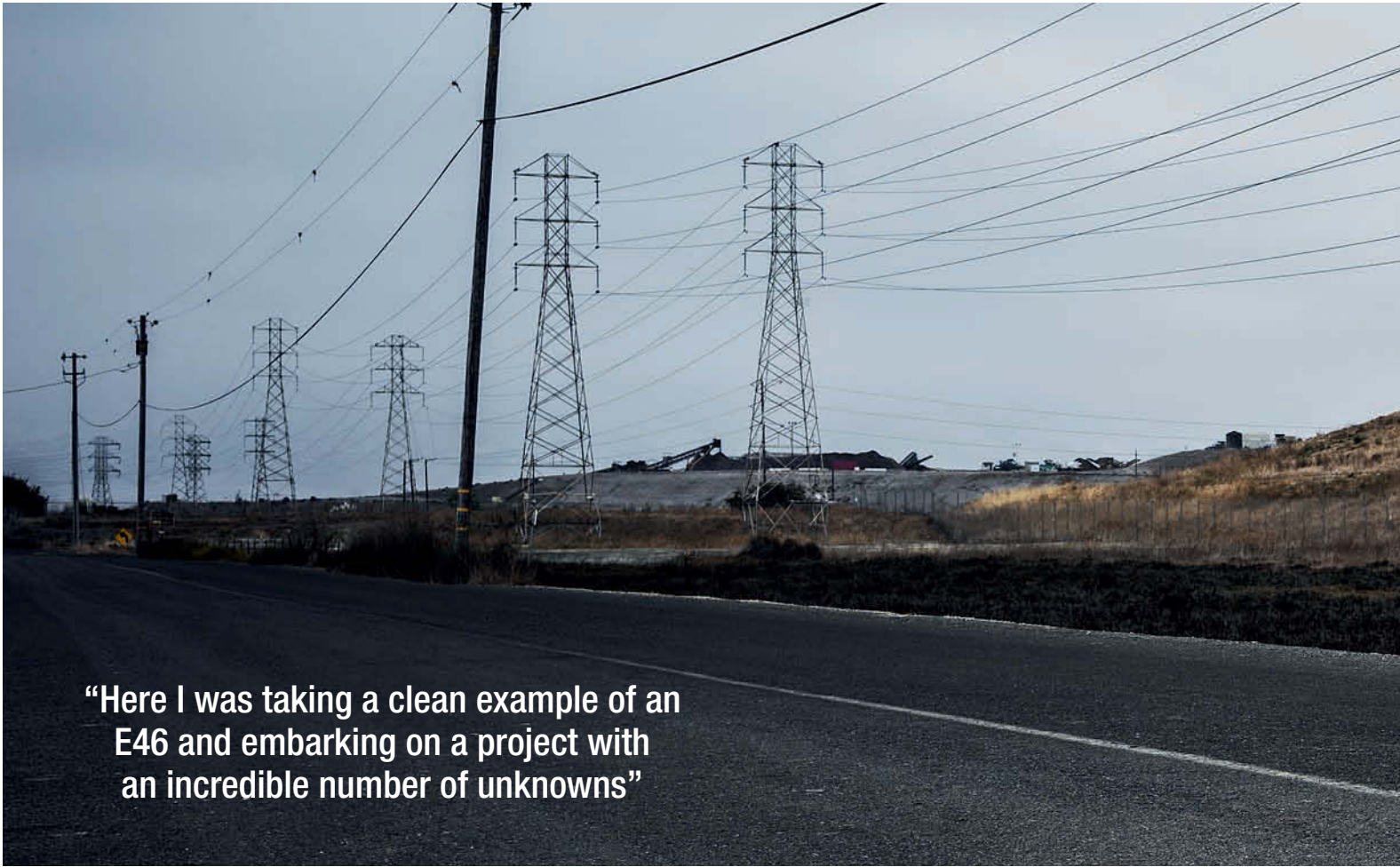


remains most dear to him. Initially, he had every intention of keeping it standard but enjoying M cars tends to rub off on you and inspired by the guys on the internet forum Kalim uses, new additions began finding their way onto the car over time. “I credit the friends I made on the E46fanatics.com forums with the downward spiral into car modification,” admits Kalim with a grin. “I had only intended to use it as a weekend cruiser and an occasional grocery getter so I was content to leave the car standard. After I bought the E30, I had quite a bit of fun at Autocross events and the first M3 served as a track car, so I didn’t feel I needed to push the sedan beyond spirited driving on

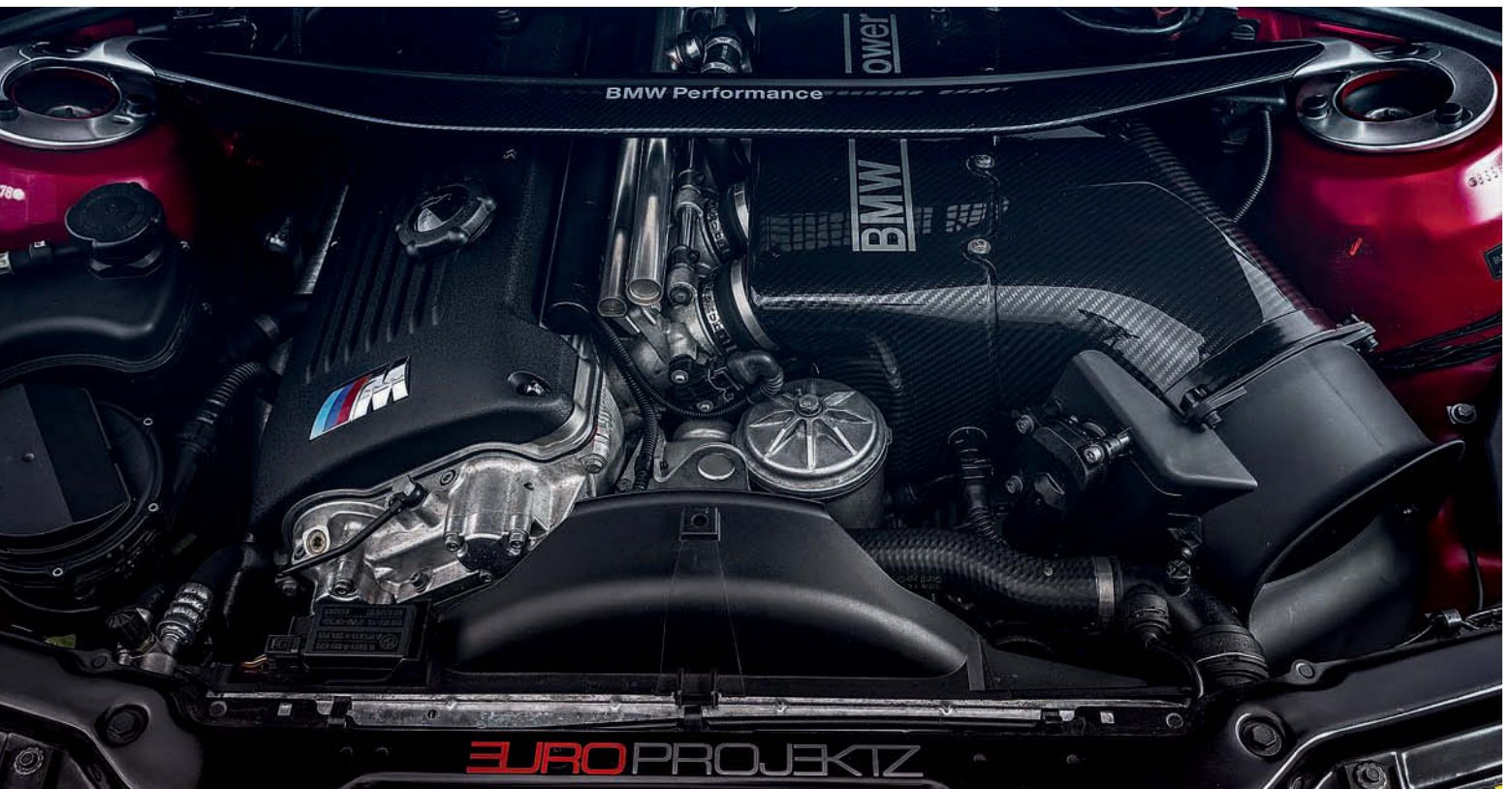
mountain roads. But after being invited to some local BMW car meets and a few drives, I saw the potential of the car and I wanted more precise handling, so I added coilovers and wheels.”

It was a slippery slope from there but it started small enough. Clear indicators, black kidney grilles, an M3 steering wheel and polybushes came along early together with aluminium differential mounts and a BMW Performance carbon fibre strut brace to improve the handling. Then came a full BMW M-Tech II aero package and, for a little while, Kalim was content with the car as it felt good to drive and looked great whilst doing it. But then as he learnt

more about the different models he embarked on bigger and more serious modifications and things began to snowball. Next was an M3 rear axle conversion and once that was complete a new idea began to form. With a few years of experience working on cars in his spare now under his belt, Kalim felt confident that he could build an M3 Saloon. In fact, the hardest part was getting his head around the idea of taking his beloved 325i apart. “The performance, sound, and driving feel of the E46 M3 sold me completely on the engine swap. I simply had to build a four-door version of that car,” he explains. “The mental preparation was actually the most



“Here I was taking a clean example of an E46 and embarking on a project with an incredible number of unknowns”





daunting part. Here I was taking a clean, barely broken-in example of an E46 and embarking on a project with an incredible number of unknowns. I had to convince myself it was what I really wanted, so I dealt with overcoming those hurdles one at a time."

Thankfully, the hurdles proved to be few as the mechanical side of things was relatively simple. Kalim tackled it sensibly and first of all sat down with the parts diagrams for his car and an M3 and figured out all of the differences. It turned out very little custom work was actually required which just meant there was the small matter of wiring it all up. Luckily, Kalim's background in electrical and computer engineering helped there but that didn't mean it was an easy task. He studied the wiring diagrams and BMW training manuals for the E46 before spending many long evenings making it all work.

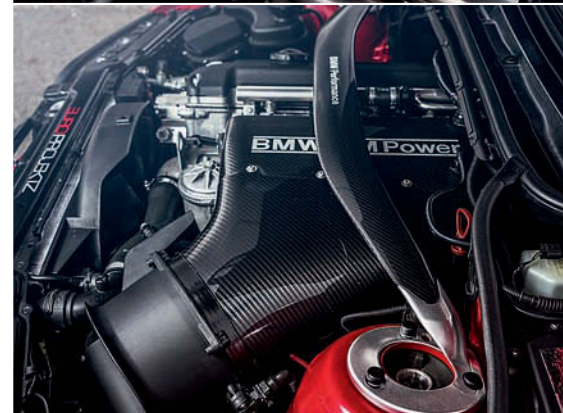
As well as undertaking the complete engine conversion he also took the chance to update and upgrade other areas of the car in one big hit. So a lightweight aluminium flywheel, Stage 2 organic clutch, and a modified exhaust were all attached to the package before fitting. "That wasn't the end, of course, because I needed more stopping power as well," says Kalim. "The rear brakes had been upgraded to M3-spec along with the rear axle swap but the front axle was still standard. I added M3 king pins, front control arms, tie rod ends, a reinforcement plate and, most importantly, an Alcon/Stasis six-piston, 365mm big brake kit."

A larger set of 9.5x18-inch BBS Motorsport GT4 RE wheels were then fitted as the older wheels no longer cleared the massive brakes, but for the rest of the exterior Kalim was careful not to give the game away. "I wanted to keep the car looking fairly standard so that from a glance it would look like an ordinary saloon with a few subtle changes for a sportier look. I did add some subtle cues like the 332i badge that only an enthusiast would recognise."

Eventually, after two-and-a-half months of long evening hours and lots of parts deliveries the car was finally ready to fire up and although it wasn't entirely finished Kalim was still pretty impressed with what he had created: "I was pretty nervous on the day of the first start. A big group of friends showed up to watch and we even setup a live feed on the forum. We recorded a video as well so everyone who had been following my build could watch as the car either roared to life or failed spectacularly..."

"Luckily, it was a great first start and the S54 engine purred beautifully. We scrambled to get the last few bits like the driveshaft and front bumper on so we could take the car on a test-drive right away. The car didn't have the exhaust fitted, so the first thing I thought was that it was really, really loud! But it was alive and had a ton of power. It still felt like my car but it moved very, very quickly. I was thrilled!"

Since then, Kalim has had plenty of time to finely hone the conversion and he now uses the car to attend car shows or for fun drives through the local





mountain range. "I've taken the car on a couple of long drives from San Jose to Los Angeles and back and my impression is that it's fast and precise. It feels much more alive than it used to with the original M54 engine and suspension. Power delivery from the S54 is phenomenal."

What's more, the car is still evolving and the latest additions have included BMW bi-Xenon headlights, a European-spec exhaust (ours are less restrictive than the American versions) and E46 M3 CSL engine management. But lastly, and perhaps best of all,

there's an E46 M3 CSL air box, which is Kalim's favourite part of the car now: "I absolutely love the air box. The induction sound is intoxicating, the power increase over the standard S54 is breathtaking, and it looks amazing in the engine bay."

There's still plenty more planned for the car, too, and next on the list are wider M3 wheel arches for the front and rear together with the possibility of fitting even wider wheels to fully fill them. There are also plans afoot for an interior makeover in the form of Recaro Sportster CS seats and a retrim in black

leather with contrasting red stitching to keep the existing exterior colour theme.

It sounds like this project isn't quite finished yet and whilst Kalim still goes on those forums we suspect it won't be for quite some time either. But that probably won't matter as he's just bought another 325i E46 Saloon and has decided to put the M3 running gear from his first M3 into it. This one will be a dedicated track car, we're told, and if it comes out anything like his road car we can imagine we'll be seeing Kalim in these pages again... ●



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# Love-Hate Relationship

**Those that have driven it love the way the X6 performs but it seems that most folk in the UK hate the way it looks. Does this still ring true for the new F16 version?**

Words: Kyle Fortune  
Photography: BMW



**Y**ou lot, I'm told, don't like the X6. BMW's conceptually conflicted Sports Activity Coupé is not among the most coveted cars on these pages. I'll not say you're wrong, but BMW's managed to shift over 260,000 of them, so it's toe-in-the-water niche-exploring experiment could be deemed successful. So much so the X6 has now sired a smaller relation in X4 guise, which might have many of you in a state of abject despair, but evidently it's good for the bottom line. Which can only be a good thing for BMW.

In case the original X6 passed you by, or you've just been wilfully ignoring it in the hope it might go away it's a four-door coupé based on the X5. I say four-doors, and coupé, it's technically neither, but then when you're comprehensively bursting market

segments who cares about semantics. So it's not a coupé, and it's a five-door by virtue of having a hatchback. More money, less practicality and, ahem, more look-at-me looks, the X6 shouldn't work. I count myself among those who have previously dismissed the X6 as a curious, pointless anomaly that might be quietly dropped, but those sales figures clearly tell a different story.

There are people who want, even like, the X6, then. People for whom the argument that an X5 does everything it does only with more space and practicality, and notably less brash looks, don't care. For every five X5s on the road, there's an X6 buyer out there, and for them BMW has introduced this new second-generation model. Deal with it. Like the 2008 original it's as flawed in its concept as it



possibly could be. An SUV (Sports Utility Vehicle) or SAV (Sport Activity Vehicle) in BMW parlance, that further confused by becoming a SAC (Sports Activity Coupé). Whatever BMW chooses to describe it, and many of you will have your own, perhaps derogatory names, there's nothing else out there like it – except that X4 – though that's all set to change with rivals set to challenge it soon.

BMW was here first though, and the X6 has unquestionably made an impact. The new one is certain to continue that, even if proportionally it's a touch more resolved than its squat, arse-heavy predecessor. It counters with detailing that is even more fussy than ever. Those lines are discussed at the Spartanburg plant by X6 designer Tommy Forsgren. Given the nature of what he's created, Forsgren is

surprisingly meek when describing his creation. He started sketching this car back in 2010, saying its 'pioneering' nature created a serious design challenge. That's not difficult to imagine, the brief is an unquestionably difficult one.

Around the front, Forsgren describes the larger more prominent kidney grille as "like a shark nose" – the overall aim to create a wider, more assertive stance on the road. Down the flanks his goal was greater surfacing and texture, something that's unquestionably been achieved, though how successfully depends on your point of view. It's busy, very, the rear-wheel arch treatment jarring a bit, though with the X6 that's perhaps the point. The rear isn't so high as its predecessor, the comical proportions of the original being altered for the better;

the tapering of the roofline helping lengthen and, in designer-speak: "provide a greater speed".

Visually that might be Forsgren's job but physically it's the engineer's concern. It's been achieved here by adding the M Performance tweaked triple-turbocharged 3.0-litre in-line diesel engine. Carsten Pries, leader in product management at BMW M, outlines the numbers: 381hp between 4000-4400rpm and 545lb ft between 2000-3000rpm. That's enough to get the X6 M50d to 62mph in 5.2 seconds, all while improving the consumption to 42.8mpg on the official combined consumption cycle. That figure is as real as fairies and unicorns, though, expect around mid-20s if you're silly, very early 30s if you're a saint. The M Performance changes don't stop at the powerplant, the chassis features specific M



tuning to the dampers and springs – air on the back – and revisions to the steering system. There are several different suspension choices on the standard X6, encompassing Dynamic Adaptive suspension, Comfort Adaptive suspension, Adaptive M suspension and Professional Adaptive suspension.

The M50d comes with that Adaptive M package, it's also standard on M Sport models, the Dynamic Drive active roll stabilisation giving the X6 agility that defies its sizeable bulk. Indeed, the best place to be is behind the X6's wheel. Not least as inside the cabin is less divisive in its style than the outside, the usual high standard of fit and finish, impeccable material quality and ease of operation as obvious here as they are elsewhere in BMW's range. It's inevitably more snug inside thanks to that roofline, getting in requiring the odd combination of a climb and a duck to ensure heads don't meet roof. It's tight in the back too, the now three-seat (marginal in the middle) compromised thanks to both the roofline, the inward position of the outer seats and limited foot room under the front seats. The boot is smaller too, but then it would be, and no the typical X6 buyer couldn't care one bit.

The X6's compromises are incidental, a by-product of its sub-set gene-pool, an evolutionary branch that shouldn't work, but does. Its focus is different, and here, in M50d guise at least it's on the driver. Tip the X6 M50d into a bend and the way it copes is nothing short of extraordinary. That roll mitigation system keeps everything flat, the X6's nose turning with alarming enthusiasm for something so weighty, it doggedly resisting understeer on dry roads.

A wet circle test on track describes the nose pushing wide if you're silly with entry speed. Keeping the accelerator pinned and allowing the xDrive system, allied here with torque vectoring, sees the power diverted to the wheels that can use it most and tightens the X6's line. Hilariously it'll drift if you're brutal with it, which might not be relevant when cruising the Kings Road or other notable post codes, but demonstrates despite the X6's oft-questioned purpose, that it's backed with some serious engineering and a staggeringly well-sorted chassis.

America's roads might not be renowned for being particularly challenging, but it really is a myth. The route out of Spartanburg takes the X6 into mountainous national parkland, and the sort of topography-hugging, switchback hairpinned, undulating Tarmac that's a serious test of any car.

## F16 X6 M50d

**ENGINE:** Six-cylinder, triple turbo diesel

**CAPACITY:** 2993cc

**MAX POWER:** 381hp @ 4000-4400rpm

**MAX TORQUE:** 545lb ft @ 2000-3000rpm

**0-62MPH:** 5.2 seconds

**TOP SPEED:** 155mph (electronically limited)

**ECONOMY:** 42.8mpg

**EMISSIONS:** 174g/km

**WEIGHT (EU):** 2260kg

**PRICE (OTR):** £66,920



Far left: Interior is excellent, although head room lacking in the back. Above: Engine is a masterpiece. Below: X6 has plenty of off-road ability





Over-zealous corner speed limits are ignored, the X6 carrying multiples of the posted limits without the merest hint of difficulty. The steering, pin-sharp in its response might be lacking in any real feel, but there's supreme accuracy. The ride, too, is impressive, regardless of what setting you have picked, the chassis people having managed to allow the X6 to control all that mass and roll yet deliver a ride comfort that is also supple and composed.

That's even true on the firmer, Sport and Sport+ settings, the two choices at the more extreme end of the Driving Experience Control spectrum. Pressing these ups the reaction of the powertrain also, and in the case of Sport+, releases the electronic stability safety net, Sport being configurable to allow the tauter damping but with the more Comfort-orientated response from the engine.

And what an engine. There's the slightest delay in translation from foot to motion, but once the 3.0-litre tri-turbo is going its force is on the other-worldly scale. It's aided by the eight-speed automatic transmission's ability to always have the correct ratio, the spread allowing the X6 its always-accelerative ability. There's little need then to shift gears yourself via the paddles, though doing so allows you to rev it out, the six-cylinder unit producing a pleasingly off-beat soundtrack when you do so. Combine that always-ready

powertrain with the X6 M50d's remarkable dynamic ability and the X6 carries speed with an ease that's in the realms of unbelievable.

That incredible, effortless pace and dynamism doesn't come at the expense of its lower speed comfort and smoothness though. Take it easier on motorways and the X6 is a supremely hushed machine, the 3.0-litre unit near-silent in its operation. Thank the torque for that, which sits easily at 80mph without reaching its point where its peak torque is delivered. Indeed, on the motorway, the only sound is the slight rush of wind and occasional tyre slap on particularly nasty expansion joints. Whether those wide tyres will be able to provide the same hushed refinement on less smooth British Tarmac remains to be seen, but regardless, the X6 is a car that'll while away hours easily, before engaging when the route gets more interesting.

It's a hard car to love, but it's impossible not to admire it having driven it hard both on road, track, and even off-road – where it'll wade, clamber and crawl like a 4x4 should. Not that it ever will, but it's nice to know it can. The X6, whatever you think about it, is a hugely capable, technically impressive and hugely entertaining car to drive, so that should be enough to justify its existence. You can hate it all you like, but the X6 has proved to be a success, and one that BMW can be justifiably proud of ●

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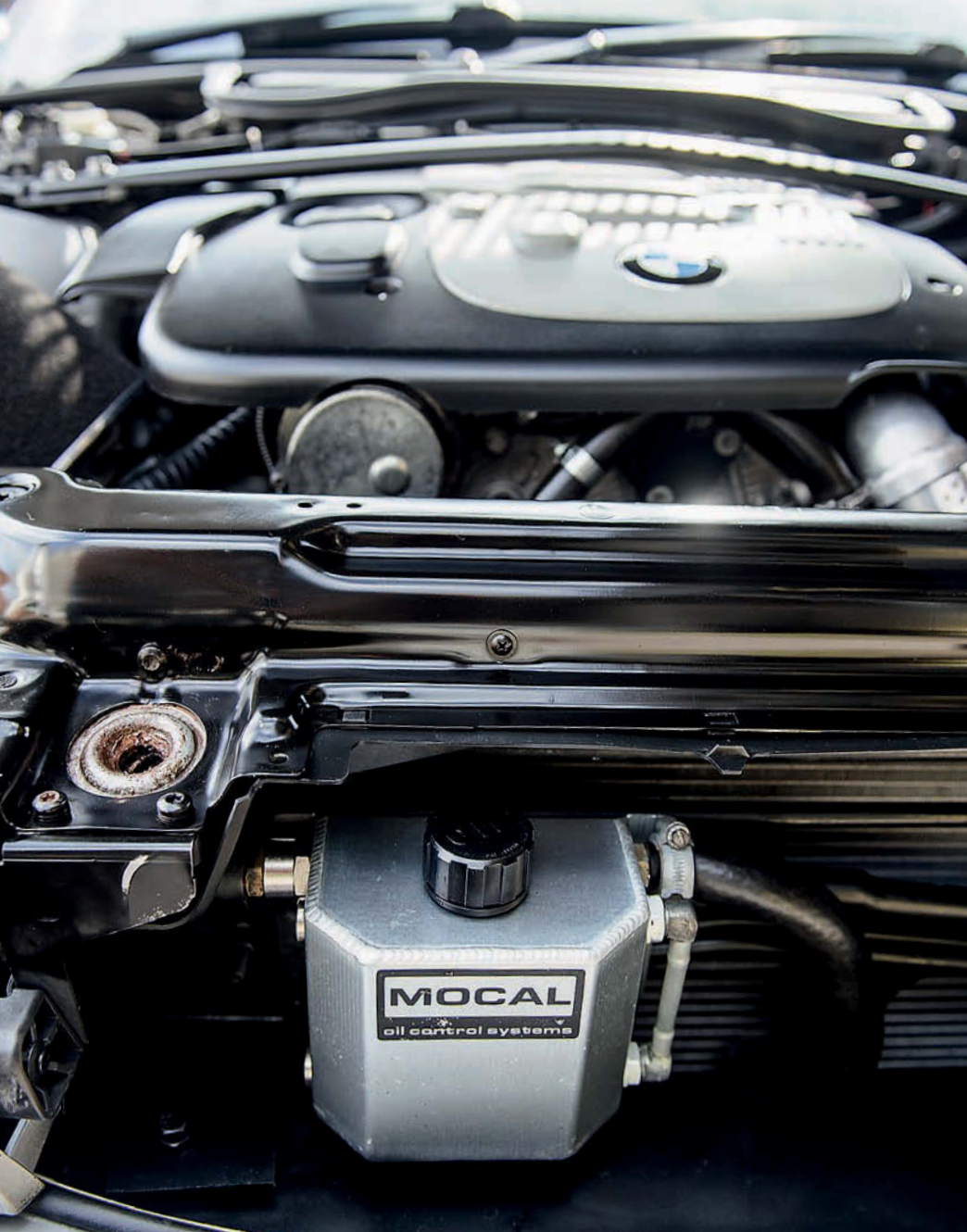
# *Talk*<sup>the</sup> **Torque**



While we all know tuned BMW direct-injection diesels produce fantastic results, the question always is how far can you go? E46 330Cd owner Chris Haynes decided to find out, with quite incredible results...

Words: Steve Neophytou Photography: Steve Hall





Left: Under the bonnet still looks virtually standard, with only an ITG air filter and Mocal oil catch tank to hint the car isn't all as it seems



While the stigma of diesel lumps being sluggish, unrefined engines built purely for economy is something that is hard to lose, BMW has probably done more to dispel this than any other manufacturer.

The M57 and more recently the N57 series of in-line 'six diesels have been at the forefront of diesel engine performance from their first release right up until the present day; and the amount of 'best engine' and 'best diesel engine' awards they have won is testament to that. More importantly for us, the drivers, is that BMW demonstrated to the world that true performance cars could really be diesel-powered, originally with the 330d, then with the twin-turbo 335d, and most recently with the M550d with its tri-turbo N57S engine. With the advent of the twin-turbo, and most recently tri-turbo diesel engines, the original single turbo version commonly found in the E46 330d has been pushed out the limelight somewhat.

Understandably, a lot of people's thoughts are that it can't hope to compete with these newer versions fitted with multiple turbochargers and much higher fuel pressures without a level of tuning that would be totally economically unviable. While the standard performance figures are indeed miles apart, Chris Haynes and his awesome E46 330Cd prove that not only can diesels be fantastic all-round road and track weapons, but that, with a little thought and ingenuity, even a single turbo diesel can be tuned to incredible performance levels without breaking the bank.

Before we go any further, let's lay this car's figures on the table for you, as you're no doubt dying to know. 407hp and 698lb ft at 2.5bar (36psi) boost on a Dyno Dynamics' rolling road. This was no lucky run on a generous dyno either, in fact it's the lowest of

the figures the car has produced at its current spec, with 412hp and 750lb ft achieved on one rolling road, and 420hp and 700lb ft on another, but with three consistent runs on the same rollers producing the original figures, those are the ones Chris is happy to claim, and we're more than happy to print.

While these numbers seem quite amazing, considering the twin-turbo 335d pushes out 282hp and 430lb ft, and even the tri-turbo M550d has a little less, with 381hp and 546lb ft, perhaps the most surprising thing about the engine is drivability has not been sacrificed. Comparing the figures in detail to the technological masterpiece that is the tri-turbo N57S, which uses its three turbos in both sequential and compound form to give a huge powerband from idle to the redline, is a good example of how impressive Chris' work is. With just one turbo, none of the turbocharging tricks such as sequential activation and compounding can be used, making it much harder to solve the common diesel problem of a narrow powerband, but despite this, Chris has proved it is possible. While Chris' engine loses out on torque up to 2600rpm in comparison to the M550d lump, he's still got 300lb ft at under 2000rpm, 400lb ft by 2300rpm, and 500lb ft by 2500rpm, which is a massive amount of lowdown grunt in anyone's book.

Further to this, while BMW claims the N57S produces 546lb ft between 2000 and 3000rpm, Chris' car produces that much, and up to 150lb ft more, from 2600rpm to 3900rpm; actually a wider rpm range than the factory tri-turbo. When comparing horsepower things look just as impressive, with BMW claiming 381hp between 4000 and 4400rpm with the N57S, but the tuned M57N in Chris' 330Cd you see on these pages produces that 381hp, or more, between 2900 and 4300rpm, and peaking over

25hp higher; despite having two less turbochargers and a lot less technology.

So while we've established this car produces amazing numbers, it's important to realise this is no dyno queen. This car is not all about the engine; it's been built as a true all-rounder. In fact it's one of the most complete performance E46 330Cd's we've ever seen. Chris uses the car for track days, trips to the Nürburgring, drag racing (116mph terminal speed, faster than an E92 M3, and similar to an E60 M5, despite struggling for grip until over 60mph), drifting, and road use too, both as a weekend toy and on occasion an entertaining daily driver, so let's take a look at what Chris has done to the car, and why.

First up, understandably, is the engine, which surprisingly is still on standard internals with no sign of weaknesses as yet, though the dreaded swirl flaps, as well as the EGR setup, have been completely removed. While the engine made around 300hp and 500lb ft when still running the standard turbo and injectors, albeit with the addition of a free flowing exhaust system, large front mount intercooler, and a generic remap, near the end of 2013, after the standard turbo expired for the second time, Chris decided to, in his own words: "Go mad with it."

Inspired by the tuning exploits of Scandinavians with another, albeit less advanced, German straight-six 3.0-litre diesel, the Mercedes OM606, not to mention how impressed he was with the durability of the M57N so far, Chris' next step with the engine was to significantly increase fuel and air flow, with larger injectors from a 535d, and a hybrid turbo setup based on E90 330d parts. The standard E90 330d unit is a GTB2260VK, which in itself is a capable turbo, but Chris sent this one to be modified by Darkside Developments, who upgraded it with a



higher flowing GT25 turbine and 66mm compressor wheel, which they call the GTB2566VK. The importance of exhaust flow on a turbocharged engine shouldn't be underestimated, especially directly after the turbo outlet, and it certainly wasn't by Chris, who fitted a custom 3.5-inch downpipe which connected to the three-inch system that was previously fitted. The original front mount intercooler setup was enlarged with a huge four-inch thick core to cope with cooling the massive 2.5bar of boost pressure, and in addition to this a Devils Own water/methanol injection was added. As well as cooling the inlet charge, Chris has found the water/meth injection significantly lowers exhaust gas temps, improving both performance and reliability at the same time.

As you can imagine, with this host of new mods the original remap was far from optimal, so the car was sent off for a custom map. "Once the car was mapped it was transformed, it pulled hard right to the 5000rpm rev limit, but at part throttle I felt it could be better, and the vibrations at idle through the uprated engine mounts were horrendous" explained Chris. Some people would live with those issues, others would shell out for yet another remap, but Chris is no

chequebook tuner, so he got hold of the WinOLS mapping software and MPPS connection lead, and taught himself to remap the car. "The first job was to increase the idle speed to 880rpm, which totally eliminated any idle shake, in fact it's not much worse than a petrol engine now, but I soon realised the map on the car, while effective, was pretty crude, so I decided to redo it all myself, piece-by-piece," Chris explained. "It took time, but I've managed to make the car just as powerful as the professionals made it, but far smoother, with less exhaust smoke, lower EGTs, and it still happily does 45mpg at motorway speeds!"

With almost 700lb ft going to the rear wheels, getting acceptable amounts of traction is no easy task, but thanks to the addition of the Quaife ATB limited-slip differential and 255 wide Federal RSR road legal track tyres, both straight line and cornering grip is actually very impressive. While the car still smokes both rear wheels by simply going full throttle in second gear in the dry, and will wheelspin at three figure speeds in the wet, it has great and controllable traction for something with such enormous torque.

Earlier E46s are well known for cracking rear subframe mounts, but it seems the massive torque

and sub nine-minute Nürburgring laps took its toll even on Chris' later car, as he had the very same problem, though he fixed this with his own 3mm sheet steel plates to reinforce the area. This wasn't the only subframe part that needed beefing up due to the huge torque either, as the front subframe needed reinforcing after cracking around the engine mounts too. Beyond this, the engine and transmission mounts, and all suspension and subframe bushes have been uprated, along with the clutch and flywheel which have been replaced with SPEC Stage 3+ items. One thing that hasn't needed uprating is the gearbox, as the six-speed manual ZF box is rapidly gaining legendary status in the tuning world for coping with incredible levels of power and torque, and it's something Chris has had no issue with at all.

We've mentioned this car's frequent track day use already in this feature, and it's posted some very impressive lap times, something you don't get from engine performance alone. Chris has put serious effort in to making the braking and handling just as impressive as the engine, running HSD coilovers, uprated top mounts, adjustable front and rear camber, uprated ARBs, and a full complement of uprated





**“If I could hold the 700lb ft  
to 4000rpm it would make 530hp...”**



## “It never fails to shock when I take people for passenger rides...”

bushes. While the car certainly has the right parts, it's the geometry setup that Chris perfected over numerous track days that really makes the car handle. "It's set up mostly for the track, but it handles great both on the road legal tyres and the Michelin full slicks I use on dry track days," he explains.

On the braking side of things, Chris' 330Cd runs M3 CSL front discs and 750i rears, with Brembo Porsche 996 callipers all-round, but he classes the most effective part of the brake system to be the Carbon Lorraine brake pads. "Even running the standard discs and callipers with racing slicks I was able to lock up the brakes even at very high speed, and they had no fade at all, and now with the bigger brakes things feel even better," Chris explained.

So on the road and track, how does it behave, and what's people's reactions to it? "Well, E92 M3s are easy pickings in a straight line, and on the way home from one dyno session even a Ferrari California was seen off too. And almost nobody believes it's a diesel when they see it go, and it never fails to shock when I take people for passenger rides," Chris laughs.

So while Chris has built what's quite possibly the ultimate tuned diesel BMW, does that mean the car is complete? Well, as is so often the way, no, not even close. First up is the rear diff ratio, which he's about to change from the standard 2.46 to a 2.28. "I've seen a

GPS-verified 174mph at 5000rpm on the current setup, but it runs out of gears so easily I think the 2.28 will not only increase top speed to 186mph, but it should improve overall acceleration too as I can hold it in-gear for longer," Chris explained. It doesn't end there either, as the immense performance increases achieved so far have given him the confidence and experience to say that a lot more is certainly possible. "I'm running around 31 degrees injector duration to achieve peak torque at the moment, so I'm sure there's more in them, and if I could hold the 700lb ft to 4000rpm it would make 530hp, so it's time to try and get some more air in. This won't happen with the current turbo though, as it's literally on its knees at the current level," Chris laughs. His plan for the engine, which may have started by the time you read this, is to replace the current turbo and manifold setup with a custom tubular item and a big Holset HX40V VGT turbocharger, and swap the stock plastic inlet manifold with a stronger and freer flowing custom alloy item.

"I'm hoping the new setup will give 3bar of boost and make good power up to 5500rpm while still having great lowdown power too. I just hope the fuel pump can keep up!" One thing is for sure, if this car's ground-breaking story so far is anything to go by, Chris is going to have a whole lot of fun finding out... ●

### 2004 E46 330Cd

**ENGINE & TRANSMISSION:** M57N 3.0-litre 24v inline six engine, swirl flaps removed, full EGR system removal, BMW 535d injectors, E90 330d exhaust manifold, 535d cam cover, Darkside Developments GTB2566VK hybrid turbo running 2.5bar boost, 3-inch custom intake with ITG filter and cold air feed, custom 3.5-inch downpipe, 3-inch turbo back straight through exhaust, custom 4-inch core intercooler setup with hard pipes, self-mapped ECU, Devils Own water/methanol injection activated at 1bar boost, Kelowe 16-inch electric fan, Mocal oil catch tank, air-con removed, Vibratronics engine mounts, 5000rpm rev limit, 2.5bar boost, ZF six-speed manual gearbox, CAE Ultra Shifter, modified gear linkage, SPEC billet steel single mass flywheel, SPEC Stage 3+ clutch, SPEC thrust bearing, Quaife ATB diff, polyurethane gearbox and diff mounts

**CAPACITY:** HSD Monotube coilovers with 12kg rate springs, front camber plates, rear pillowball top mounts, H&R adjustable front and rear ARBs, complete Powerflex Black series uprated suspension and subframe components, aluminium rear camber arms, custom front and rear subframe reinforcement plates

**BRAKES:** BMW M3 CSL 345mm front discs, BMW 750i 328mm rear discs, Brembo Porsche 996 four-pot callipers front and rear, Carbon Lorraine brake pads (RC6 front, RC5+ rear), braided brake lines, ATE Racing Blue DOT4 fluid.

**WHEELS & TYRES:** BBS CH015 8.5x18 with Federal RSR 255/35/18 tyres for road use, BMW MV2 8x18 with Michelin 240/640/18 racing slicks for dry track use, 90mm wheel stud conversion

**INTERIOR:** Full heated electric M Sport leather, exhaust gas temperature and boost pressure displays  
**EXTERIOR:** Standard M Sport exterior with de-chromed kidney grilles.

**THANKS:** Big thanks to my dad for not only helping with machining and welding on this project, but he is the one who got me in to mechanical stuff in the first place – he even taught me how to weld. I would also like to thank my good friend Gaz for the use of his workshop so I could build the car and Darkside Developments for building an awesome turbo





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Very occasionally, a machine may grab your immediate attention but even then you might not be able to put your finger on what exactly it is that's so special. That's what happened with the car you can see before you here. There are quite a few BMW events in the Netherlands where we find a very decent array of classic Bavarian machinery, but every now and then a model turns up that impresses even the most experienced BMW fan. We decided to dedicate a few articles to those cars, starting here and now.

The annual Sharknose Meeting that takes place in May is a good example of getting to know the active community and their cars as literally hundreds of enthusiasts of the blue and white roundel gather, and not just from Holland, as we see an increasing number of entries from Britain and Germany every year. And usually quite a few examples of the first generation 3 Series, the E21, attend. Mostly we see the standard two-door saloons, but also Alpinas, and some special cases like a Hartge conversion, some track day cars and a couple of impressive conversions featuring more modern BMW power plants.

There are usually a lot of Convertibles, too. Rumour has it that BMW found that the E21 chassis was not strong enough for a fully open version and turned to its long time partner, coachbuilder Baur, for its soft-top E21 conversions. Baur helped BMW out when there were production issues with the iconic M1 and had already built several open BMWs like the fully convertible 1600-2 and the Targa version of the '02 series. For the E21, Baur came up with the top-



# SUN WORSHIP

A Convertible E21 is a rare beast indeed, especially when it's a Lumma conversion as we discovered when we unearthed this gorgeous machine in the Netherlands

Words: Jeroen de Laat Photos: De Laat Foto





cabriolet. A hard-top resting on the strengthened structure of the windscreen and on a roll bar constructed on the B-pillar. Behind the roll bar there was a soft-top that folded down independently which enabled a measure of open top driving even at motorway speeds.

A similar design was used for the later E30 3 Series too, and because of the more rigid structure the Baur conversions even remained in existence alongside the much more stylish fully convertible BMW E30, which was developed by Baur as well. Anyway, Baur conversions were just a box you could tick at the dealers and retain full BMW warranty which made this a special co-operation.

Still, not everyone thought the E21 Baur was the most stylish solution. Several smaller businesses, of which a few were located in Germany at the time (like Baur), decided to start working on a completely roofless version of the E21 Three. Peters from the German city of Paderborn carried out 20 of these conversions and Hornstein also did a few. And then there was a company called Lumma Cabriotechnik & Design, the business of one Horst Lumma.

Horst Lumma started his business in Fahrzeugveredelung (design refinement) in 1987 from the town of Winterlingen in the south of Germany and specialised in the mechanical and optical tuning of BMW, VW and Mercedes-Benz vehicles. In the early 1990s Lumma decided to undertake pick-up and convertible conversions and E21 and E30 3 Series models were turned into utility vehicles. However, it was Lumma's convertibles that drew the most attention and customers. '02s were turned into full cabriolets, as were E30s, too. There were already factory versions of the E30, but if you wanted something more exclusive, or personalised to your own requirements, Horst Lumma was the guy to talk to. In between these models there was the E21 3 Series that never saw a top-less factory version and Lumma also offered a little known conversion for these machines, too. Its work on the E21 was based on E30 parts and construction with its E21s receiving a reinforced structure and a folding soft-top that was stowed underneath an E30 style cover which gave a better look than leaving the folded hood as a lump on the rear deck.

Since cabriolet versions of the '02 and E30 are pretty common, the E21 convertible is the odd one out and that's why it immediately caught our eye when one drove up at the Dutch Sharknose Meeting. Owners Jan and Debby van Boerdonk had just

finalised the paperwork on a restoration that was mostly performed by the previous owner from Poland. The black paintwork looked flawless and the roof (that was still closed when they arrived at the site) looked as clean as factory-fresh workmanship. But when the top was tucked away under the E30-style cover, the shape of the early E21 320 six-cylinder is nothing short of stunning. We were too busy to spend a lot of time with the car, but after a brief chat we exchanged phone numbers knowing we had to dedicate a future sunny afternoon to this car...

Jan's passion for BMWs goes way back to his younger days when he mainly focused on the younger models. However, when he saw a mint E21 at his local garage, he decided it was time to have a classic and he started looking for the twin exhaust top-of-the-range 323i. He couldn't find one immediately, but after a while his garage contacted him as there was an Alpina B6 2.8 for sale, which was a step up from the 323i of course. After some negotiations the car was his. The love for the E21 was born and he still owns this car today.

A few years later Jan and Debby decided they wanted a convertible, and they evaluated several options; perhaps a Baur version or an E30 Convertible as they liked its fully open design...? Then they ran into this Lumma that combined the classic looks of the E21 with their much wanted fully convertible chassis. It took some serious negotiating before they could pick up the car but it was all worth it in the end! Then a period of nitpicking started, and in some cases that required quite a bit of ingenuity, for example with the custom seals around the windows, but Jan did a great job there. The interior wasn't that special so the stock seats (preferred to the popular but quite narrow Recaro sports buckets) were covered with fresh grey leather with in-stitching to factory standard. All-in-all there wasn't too much work required but finishing off the details took their time.

And there she is, the paintwork shining like new. The M20 2.0-litre straight-six fires right up and runs quietly and smoothly. When we open up the frameless door we notice the fat reinforced sills that will be familiar to all owners of E30 Convertibles. This is how Lumma maintained rigidity instead of bolting a sub-chassis underneath the car like Peters did for its E21 conversions for example. A glance over the mint leather makes you check your pockets for sharp objects before sitting down – we can't be responsible for ruining this rare masterpiece!

The ZF three-speed automatic gearbox smoothly





The shape of the early E21 320  
six-cylinder is nothing short of stunning



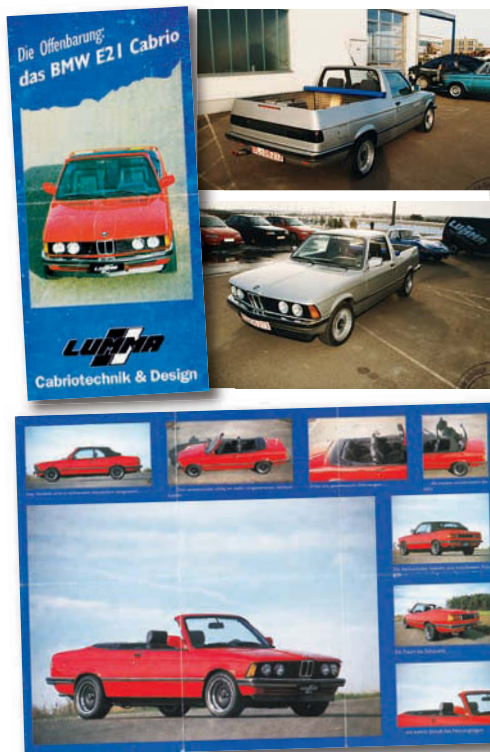
engages drive and we almost float away without any rattles. On bumps the suspension feels a bit more firm but never really harsh – just the comfort we want from an open cruiser. “If I want more sportiness I can always jump in the B6,” Jan adds with a smile. The car even has air-conditioning for the hottest days, but that option isn’t used very much. Even though we only have a brief drive together it is good enough to get a great impression of this rare summer car. It is time to stop, fit Lumma licence plate covers and take some photos...

In the meantime Jan explains that there were two different versions of the E21 Lumma Convertible. The most common version, with about 30 examples made, is relatively simple, with only front side windows and a soft-top that covers the area where the rear side windows used to be, with small plastic peekholes on the rear corners. The machine we have here, though, is based more on the E30 and has rear side windows as well, allowing the driver a much improved view all-round. As to how many of this type were built it’s hard to say with 100 per cent certainty as Lumma didn’t keep very detailed records back then, but it is likely that only three conversions were made in this rare style.

We try to picture the car from all different angles as we ask Jan and Debby for their plans for the future. They admit to have considered selling the Lumma but they abandoned that plan as it is pretty hard to find another classic convertible BMW that is this rare and still affordable. And what more would they need in a convertible? Instead they will concentrate on the B6, which is up for a restoration to get it back into mint condition. We are already looking forward to the end result on that one too.

And Lumma Design? It gave up work on its convertible and pick-up conversions a long time ago. Nowadays it focuses on exterior and interior redesign for BMW, Range Rover, Porsche and Mercedes ●

Below: Lumma’s conversions included pick-up versions of the E21 too. Original brochure for the E21 Convertible shows the car’s clean lines







# Full Fat

If you're going to tune an X5 you might as well start with the big daddy of the BMW range, the X5 M50d. This resulting creation from AC Schnitzer is pretty special

Words: Bob Harper Photography: Max Earey





Schnitzer's M50d offers huge performance; 'Engine Optics' kit looks good and adds a bit of flair to the engine bay

More or less no matter what  
you do, the chassis simply follows  
commands from the steering wheel

**Y**ou could make a perfectly good case for arguing that trying to tune and extract a little more sporting intent from a Sports Utility Vehicle that weighs more or less the same as two E30s is a little bit perverse.

After all, anything that tips the scales at getting on for two and a half tonnes is hardly likely to be your sporting weapon of choice. You could argue, though, that the X5 is no ordinary 4x4 – BMW coined that old SAV (Sports Activity Vehicle) chestnut to indicate that this wasn't just another four-wheel drive truck – and that even in its standard form it's aimed at the enthusiastic driver, not just someone who wants a luxury load lugger. And if owners want a little bit more from their 4x4 who are we to suggest that they can't have it?

When the X5 first hit the streets 15 years ago we can remember having conversations with various BMW tuning firms about whether they would be offering any upgrades for the car and the general consensus of opinion seemed to be 'let's wait and see.' Well, it didn't take long for the wheels, body kits,

interior goodies and performance upgrades to come to market as after a scant few months it became obvious that the X5 was going to be a huge hit. And that's been true of each subsequent generation and as buyers have lapped them up there have been a plethora of possible upgrades available, ranging from the mild to the wild. With the second generation car there were plenty of wild wide-body conversions to choose from but it seems that with this F15 incarnation the tuners have decided to tone down their offerings somewhat as even some of the emerging markets are demanding a slightly more sophisticated look.

And that's certainly what we've got here today with this AC Schnitzer-fettled example. It's not that Schnitzer hasn't done very much to the car, more a case of what has been done has been carried out in a pretty stylish way, echoing the OEM styling but with a hint more aggression. This particular machine has been around for quite some time as it graced Schnitzer's stand at the Geneva Motor Show, but it was almost overshadowed by the announcement and

## AC Schnitzer X5 M50d

**ENGINE:** N57D30S1 six-cylinder, 24-valve, triple turbo diesel

**CAPACITY:** 2993cc

**MAX POWER:** 430hp @ 4400rpm

**MAX TORQUE:** 620lb ft @ 2000-2400rpm

**0-62MPH:** 4.9 seconds\*

**0-125MPH:** 21.1 seconds\*

**50-75MPH (5th/6th):** 4.0/5.2 seconds\*

**TOP SPEED:** 155mph (limited)

**WEIGHT (UNLADEN):** 2319kg

### MODIFICATIONS

**ENGINE:** AC Schnitzer performance upgrade, engine optics package

**WHEELS & TYRES:** Driver's side: AC Schnitzer Type V Lightweight Forged alloy wheels, 10x22-inch with 295/30 ContiSportContact tyres (front), 11.5x22-inch with 335/25 ContiSportContact tyres (rear). Passenger side: AC Schnitzer Type VIII Racing Forged alloys in the same sizes as above

**SUSPENSION:** AC Schnitzer Spring kit

**STYLING:** AC Schnitzer front skirt, rear valance with integrated diffuser, bonnet vents

**EXHAUST:** AC Schnitzer sports rear silencer with 'Racing' tailpipes

**INTERIOR:** AC Schnitzer pedal set and footrest, floor mats and key holder

\* Figures from Auto Bild Sportscars

unveiling by Schnitzer of its tuning program for the Range Rover – the first time the company has made a foray into the non-BMW Group market.

However, while the X5 may have been subtly styled, Schnitzer decided to go the whole hog when it came to which model to fettle, so the example we have here is – until the X5 M that you can read about in our News pages arrives – the top dog, the triple turbo M50d. Quite why anyone should need more than the 381hp and 546lb ft that the M50d serves up is slightly beyond our comprehension, but while you might not *need* more, you may well *want* more.

And while there's a market for these upgrades, Schnitzer is more than happy to oblige. The figures for the uprated M50d are pretty impressive with power boosted by 49hp to 430hp at 4400rpm and torque up to a faintly absurd 620lb ft at 2400rpm. In standard form the BMW power and torque curves both have a bit of a plateau at their peaks but in the Schnitzer example there's simply more of both wherever you might like to look. And a quick gander at the figures reveals the amusing fact that at



1000rpm the Schnitzered X5 is producing approximately 100lb ft more torque than an E92 M3 can muster at its peak!

The impressive figures are achieved with the aid of a Schnitzer tuning box and for those of you not fortunate enough to own an M50d the good news is that the company either has, or has in development, performance upgrades for all X5 models and all of them see very respectable gains. Some tuners might offer more in the way of headline figures but with Schnitzer's experience and own impressive warranty on its tuned engines, you know that no components will have been pushed too far in extracting the additional power and torque.

With the significant gains that Schnitzer's achieved though, you'd be expecting that to be reflected in the performance figures and tests by German magazine *Auto Bild Sportscars* would seem to back this up. It tested this very vehicle in a twin-diesel SUV feature with a Techart Porsche Cayenne diesel and recorded a 0-62mph time of just 4.9 seconds – an improvement over the standard production M50d of

0.4 seconds – while its 0-200km/h (125mph) figure was very nearly four seconds faster than standard which is a very significant improvement.

There's more to a Schnitzer-fettled machine than just a power increase, though, and to ensure that its new-found performance can be transmitted to the road safely, Schnitzer's equipped its X5 with a spring kit that lowers it by around 30mm at the front and 20mm at the rear. The aim with its setup has been to maintain excellent ride quality yet give a better grip on body roll in the corners. They've also been designed to work in conjunction with Schnitzer's upgraded wheel and tyre combinations for the car.

As is often the case with show cars, Schnitzer has equipped its X5 with different wheels on either side of the X5 so as to better reflect the different options available to buyers. Thus on the driver's side (it's left-hand drive, remember) we have a set of AC Schnitzer Type V Lightweight Forged alloys while on the passenger side there's a set of Type VIII Racing Forged alloys. Both designs measure a monster 10x22-inches at the front and 11.5x-22-inches at the

rear and are clothed in 295/30 and 335/25 ContiSportContact tyres front and rear respectively. Type VIII and Type IV alloys in 20-inch diameters are also available but we reckon if you're going to be shelling out a fair chunk of cash for some upgraded alloys then it's worth going the extra couple of inches in diameter to make them stand out from the crowd. From a personal point of view I'd go for the Type V alloys every time as I do really like their very clean and elegant design.

However, if it doesn't drive well on the 22s then I'll stick with the standard setup and it's with this in mind that we sally forth from Schnitzer's Aachen HQ. While we're trundling along on our way to the photo location I have a bit of a glance around the cockpit but truth be told Schnitzer hasn't really done all that much in here. When an interior is so intrinsically well designed as that of the F15 generation of X5 you do run the risk of spoiling things by trying to do too much by way of changes inside. Thus Schnitzer's kept it simple with a pedal set and foot rest, a set of floor mats and a natty little key holder that sits in one of



the drinks receptacles in the centre console.

Town driving seems to suit the X5 well, though, and while we've not had a chance to let the X5 off the leash yet the ride doesn't seem to have been affected by the increase in wheel diameter and the fitting of the springs. All thoughts of the ride quality are briefly put to one side as we dive on to the motorway though and can finally experience what 620lb ft of torque feels like. Crushing the throttle pedal to the floor sees the X5 firing itself up the road with the sort of pace that seems faintly ridiculous for something this size. Maybe because the overall package is so refined but it doesn't *feel* quite as fast as I was expecting but a quick glance down at the speedo demonstrates that it's probably my senses that need recalibrating. And if any further proof was needed our 435i camera car that's following me does seem to be struggling to maintain this level of acceleration.

Once we're at our photoshoot location I have a proper look at the X5's new aero parts and I think that it's done an excellent job of essentially tweaking BMW's own design here. The front is more aggressive due to larger air intakes within the front lower valance while at the rear the new lower rear bumper finishes things off nicely. It's almost like Schnitzer has taken its styling cues from the M aero kit and taken it to the







Carbon bonnet vents are not completely to our taste; 'Racing' exhaust trims look good and the silencer sounds good too; wheels are 22-inches in diameter and are Type VIII or Type V

## Crushing the throttle pedal to the floor sees the X5 firing itself up the road with the sort of pace that seems faintly ridiculous

max. The result is a more aggressive look whilst retaining a pleasantly reassuring OEM flavour. What spoils it for me personally are the bonnet vents – they just don't do it for me and I think they cheapen the look of what otherwise looks like a classy product. Fortunately we're not all the same so I'm sure there are also plenty of potential owners who will love the look. One item we haven't mentioned is the Schnitzer rear silencer with 'Racing' style trims and they do look good and suit the car. As we'll discover shortly the rear exhaust box also manages to tease a little more noise from the straight-six, too.

Once Earey has finished with his static and detail images it's time to hit the road again for some moving images and this gives me another chance to sample the car's performance. The way it steps off the line is hugely amusing as you simply bury the

throttle and marvel at the grip and sheer accelerative force that gives the impression that you've entered some slightly bizarre fast-forward universe. The exhaust adds a little more drama to the proceedings and while the triple-turbo diesel is never going to sound as cultured and inspiring as a petrol unit it does exhibit its own gravely, bass-rich charm that's not unpleasant.

The other aspect of the Schnitzer X5 that can't be ignored is the seemingly unfeasibly high levels of grip it's capable of generating. More or less no matter what you do, the chassis simply follows commands from the steering wheel and offers exceptional body control for something that's so heavy and with a relatively high centre of gravity. Oh, and when you're not on a charge that ride quality is really very decent for a machine with such small tyre sidewalls.

Ultimately, the changes Schnitzer has made are relatively minor but add them all together and the X5 M50d has definitely been improved. I was slightly disappointed with the standard machine I drove in the UK, but the Schnitzer example got me significantly more excited. Initially I couldn't quite get my head around why you would need to upgrade the M50d, but now I've experienced the Schnitzer machine it all starts to make a lot more sense ●

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# E39 M5

Depreciation has seen E39 M5 prices drop to a very affordable level and while we won't pretend it'll be a cheap car to run it's such a fine machine that we reckon you must sample one at least once in your life. It could be a sound investment, too...

Words: Bob Harper Photography: milleniumheroes.com



Has BMW ever made a better all-rounder than the E39 M5? You could make a case for several other machines, I suppose, but nothing comes quite as close to being so intensely *right* straight out-of-the-box as the third generation M5. It was just so good at so many things – back road blaster, occasional track day weapon, cultured cruiser – and yet had the ability to swallow the whole family and its luggage, too.

The S62 V8 is an absolute peach to sit behind and to open its taps wide is to experience greatness. No, it's not perfect, but an M5 in fine fettle really is a joy to drive and is still a very rapid machine, even today. It almost acts as BMW's crossover car – it bridges the gap between the analogue E34 and the significantly more digital E60 – electronics might have been creeping in but bar a hypersensitive traction control system there's nothing in its electronic armoury that spoils the driving experience.

And the best news of all is that prices are currently still low. They're on the rise, though, so don't pussyfoot around trying to decide if you want to buy one. Hurry out now with wallet in hand and grab one before values go the same way as other older M cars.

## History

The M version of the E39 was unveiled at the Geneva Motor Show in 1998 but it wasn't until October 1998 that full-scale production started. While E28 and E34 M5s had been hand-assembled by M GmbH at Garching, the new car was manufactured on the regular 5 Series production line at Dingolfing which allowed the car to be made in much larger numbers – 7895 LHD European-spec cars, 9992 LHD North American machines and 2595 RHD examples were produced, making a grand total of 20,482.

Up until this point all M5s had used a twin-cam 24-valve straight-six – the superb M88/S38 – but that unit had been taken as far as it could go so the E39 M5 became the first M car to feature an eight-cylinder engine – a stonking great V8 displacing nigh on five-litres and developing a very healthy 400hp at 6600rpm. It was based on the M62 unit from the 540i and the new M powerplant was designated S62 and extensively revised for its M application.

Bore and stroke were up (2mm and 6.3mm respectively) to give a capacity of 4941cc, the compression ratio was upped to 11.0:1 and following proven M engineering philosophies there were

individual electronically-controlled throttle bodies for each cylinder. There was also a double Vanos variable valve timing system on both the intake and exhaust cams, modified cylinder heads, oil-cooled pistons a G-force sensitive lubrication system, a coolant-to-oil heat exchanger, hollow camshafts, a dual air induction system and a high capacity water pump. While a specific output of 81hp per litre was mildly disappointing (the 3.8 E34 had 90hp per litre) the E39's trump card was its flexibility – 369lb ft of torque all the way from 3800-5000rpm, but a glance at its torque curve tells a story of even greater flexibility with 354lb ft being available from just 2000rpm.

The V8 was mated to a Getrag Type D six-speed manual gearbox, similar to that used in the last of the line 3.8 E34 M5s, but with very slightly revised ratios and an uprated clutch was installed. There was the expected 25 per cent limited-slip differential, although for the first time on an M, BMW managed to link this up to its DSC Dynamic Stability Control which made the car much less of a handful in the wet.

The basic suspension layout followed that of its E39 brethren with MacPherson struts up front and a multi-link system at the rear and like other E39s there



was extensive use of aluminium to help to keep weight down. Springs were shorter and rated differently for the M5 and the shock absorbers also had bespoke valving and there were thicker anti-roll bars front and rear as well as steel ball joints in the place of rubber rear suspension bushes.

Steering was by recirculating ball but with a reduced ratio when compared to a 540i – 14.7:1 for the M5 versus 17.9:1 for the 540i. There was Servotronic assistance which was road-speed dependant but which also had two different ‘maps’ accessed via the M Driving Dynamics (Sport) button on the centre console which also significantly sharpened throttle response. When in Sport mode the steering was noticeably heavier.

Naturally enough the brakes were uprated to cope with the extra performance with 345mm front discs and 328mm rears (both vented), but somewhat inexplicably M decided to grip the discs with single piston callipers ensuring that the car’s brakes have constantly been one of its weak points.

Like previous M5s, externally there were a number of changes to ensure that it stood out from the crowd, but in a subtle and understated way. There was a set

of tasty 18-inch chrome shadow alloys (8-inches at the front and 9.5-inches at the rear) which were shod with 245/40 and 275/35 tyres respectively. At the front the kidney grille featured a slightly larger chrome surround and there was a new front bumper/spoiler assembly and again at the rear there was a new bumper and valance through which sprouted four beefy exhausts. The mirrors were bespoke (and electrically folding) while there was also a pair of M5 badges on the side mouldings. Completing the package was a subtle body-coloured bootlip spoiler.

Inside there were grey-faced M dials with an 180mph speedo and a rev counter with an illuminated section that started at the 4000rpm mark which acted as a warning when the engine was cold to not use all of the revs.

When the M5 hit the UK showrooms in late 1998 it was priced at a heady £60,000, but you did get quite a few goodies for your money. Climate air conditioning, electrically adjustable sports seats with driver memory, heated seats, steel sunroof, xenon headlights, ten-speaker Hi-Fi system, six-disc CD player, M multi-function steering wheel, on-board computer with check control and eight airbags were

all standard. Naturally enough you could also have some fun with the options list with sat nav, double glazing, Alcantara headlining, various different leather options, enhanced stereos and electric blinds all being offered, among others. It wouldn’t have taken much doing to see your £60k M5 turn into a £70k M5! However, the price did drop significantly (down to £52,000) when BMW ‘realigned’ its prices (along with the majority of other manufacturers) when UK buyers cottoned onto the fact that we really were being ripped off when it came to car buying in the UK.

Production changes were few and far between, but the main ones were a change in piston ring design in early 2000 to try to quench the V8’s thirst for oil and the September 2000 face-lift which saw the arrival of angel-eye headlights, revised rear light clusters and a new, sleeker 6.5-inch on-board monitor.

### Buying one

It’s not that long ago that the classifieds seem to be riddled with cheap E39 M5s and one could have been forgiven for thinking that these were unloved big-engined bruisers that almost couldn’t be given away. That will certainly have been the case for some



cars that may have had high mileage and had fallen into the hands of owners who loved the idea of the V8 and the associated performance but who couldn't afford to carry out basic routine servicing let alone fix faults or carry out any preventative maintenance.

These days there seem to be far fewer of the £4k 'spares or repair' type machines on the market and as your typical E39 M5 buyer is now becoming far more discerning you may find that the cheaper cars tend to hang around for sale for quite a while whereas the more expensive cars that have far fewer faults are snapped up pretty rapidly. There does seem to be a trend in rising prices so you need to get on the M5 rollercoaster before they reach the point where you can no longer afford to buy one.

Below around the £8k mark you'll find higher mileage examples that will probably have a number of faults even if their owners describe them as immaculate. There's no reason not to go for one of these machines so long as you walk into the relationship with your eyes open – work out what's wrong and the potential cost for rectification and if the numbers stack up then go for it. Higher mileages still put potential owners off but it's not something to be scared of provided the car has had regular maintenance. An M5 that has been regularly used may also be a better prospect than one that's been sat idle for any length of time as these cars do have a knack of going wrong when not doing anything!

The middle ground of M5 ownership starts at £8k



and runs up to £12,000-13,000 and here you'll find a range of mileages, years and options. You can often find machines that are actually more or less the same at either end of the spectrum and their prices will simply reflect how optimistic or pessimistic their owners are. You'll need to be looking at a car with a full history, a set of receipts to back this up and evidence that some of the common problems have been rectified.

From here prices stretch up to the £30k point with one North London BMW dealer fielding several very low mileage machines for the sort of money that should be bagging you the very, very best cars available. As a long-term investment they may well turn out to be good value for money and you do get the peace of mind that a full BMW Approved Used Warranty brings, but given that some independents are offering machines with around 60k miles on the clock for almost half the price we don't currently think the main dealer machines offer value for money.

All prospective buyers must do their research covering everything from the basics of exterior colours, specific interiors and available options to common problems and the price of rectifying them. Look at as many cars as you can, look at how the owner treats the car (does he rev it hard from cold, for example?) and insist on seeing all the receipts and invoices for work that's been carried out. And finally, buy on condition, not mileage. You may be surprised to discover that there are probably as many low mileage

dogs as there are high mileage gems. And it might seem so obvious as to go without saying, but if you're not 100 per cent certain you're mechanically-minded enough to know what you're looking at, get a potential purchase inspected by a specialist. It will undoubtedly be money well spent as an inspection will definitely throw up a point or two that can be used as a good bargaining tool.

## Colours, interiors and options.

While it's all well and good deciding you want an Estoril blue M5 with Caramel Heritage leather complete with sat nav and the built-in rear child seats the reality is that you will have to compromise somewhere along the line when it comes to the spec of your ideal M5. Give yourself a couple of interior and exterior colour combinations to choose from and try not to get too hung up on the car having sat nav. Both the first and second generation units are now about as much use as a chocolate teapot although, having said that, we can appreciate that the widescreen sat nav unit does look good sitting in the middle of the dash! Remember that it's relatively easy to replace an early sat nav for a later one and that pre-face-lift headlights can be replaced with the more pleasing angel-eye units and celis rear clusters.

If you have your eye on resale then we reckon Carbon black and Le Mans blue are probably the most popular colours and currently Heritage leather seems to be slightly preferred over the two-tone sports seats.

Think carefully about buying one with a lairy colour combination on the seats as it might put off future buyers, although as one man's meat is another man's poison it probably makes more sense to buy what you like, especially if the car is to be a long-term ownership prospect. You can bet your bottom dollar that if you buy an E39 M5 and keep it in good order you'll definitely be able to find a buyer in the future as these cars will only get rarer and more desirable as time goes on.

We've listed the various colours and how many of each came to the UK (see page 62) courtesy of the kind folk at [www.m5portal.com](http://www.m5portal.com). If you're interested in M5s – whichever generation – you really should register for the site as it has incredibly detailed information on all M5s – options fitted, interior colours, Individual specs etc. If you want to know what percentage of UK M5s came with sat nav M5portal has that information (66.9 per cent or 1737 cars, if you were interested), or how many UK cars had the rare Comfort Seats (just 95 cars, or 3.6 per cent of UK cars). No matter whether you're after European, UK or North American production statistics, M5portal has them all. Highly recommended.

## Bodywork

Had we been writing this a few years ago we could have almost glossed over this section without going into too much detail but the E39 M5 is now of an age where rust is becoming an issue. You shouldn't be too



The S62 V8 is an absolute peach to sit behind and to open its taps wide is to experience greatness



## E39 M5 exterior colours, UK models

COLOUR	COLOUR CODE	HOW MANY
Carbon black metallic	416	711
Le Mans blue metallic	381	556
Silverstone metallic	425	389
Avus blue metallic	276	254
Titan silver metallic	354	220
Imola red II	405	79
Anthraxite metallic	397	57
Alpine white III	300	52
Bluewater metallic	896	44
Oxford green II metallic	430	40
Black II	668	34
Sterling grey metallic	472	31
Oxford green metallic	324	21
Royal red metallic	390	9
Chiaretto red metallic	894	2
Sonderlackierung (Individual)*	490	96

\* Most popular Individual colour was Estoril blue (32 examples) followed by Velvet blue (20 examples).  
For full breakdown see [www.m5portal.com](http://www.m5portal.com)

worried, though, as the vast majority of well-looked-after examples shouldn't have too much serious rot. Do bear in mind that a car that's spent all its life by the coast, or one coming from a part of the country that sees a lot of salt being spread on roads for large parts of the year, should be checked a little bit more closely underneath. We have heard of some cars that looked good up top but had serious corrosion underneath, and some so severe to make the car only suitable for breaking. Rear jacking points and subframe mountings should be examined, as should sills too. If it's rusty to any extent underneath move on to the next car as repairs could well be uneconomic.

What might be more obvious will be the cosmetic issues that affect E39s. Bootlids rust where the two sections of metal join and rust around the filler flap is common as there isn't a drain hole, which makes this area a real water trap. If you pop the bonnet have a look at its leading edge from the inside as rust here is quite common. Check the lights for damage – stone chips to the front covers can lead to misting up, as can faulty seals, and as all M5s came with xenons finding good used replacements is expensive. Having said that, if you're looking at a pre-face-lift machine then damaged lights would be a good excuse to replace them with Hella angel-eye versions.

Check the bespoke M5 mirrors still fold as motors can seize up over time, especially if an owner doesn't use this function, and new units are very costly. Examine the plastic front and rear bumpers for cracks and look for consistent panel gaps round the car and make sure the panels aren't 50 shades of grey indicating previous accident damage. While you're at it check the wheels for obvious signs of kerbing or corrosion – not a disaster but a good bargaining point.

Finally, have a close look at the Shadowline exterior trim as it tends to develop rust-type bubbles under the surface that look somewhat unsightly and if all the pieces of trim are thus affected it'll be expensive to put right.

## Interior

Generally speaking, and as befits the model range that was dubbed 'the best car in the world', the E39's interior is a hard-wearing, pleasant place to while away the days. As we've already mentioned, there were a number of interior combinations and they should all be fairly durable, although if the car you're looking at has an unusual leather combo then pay particular attention to it to ensure there won't be any costly repairs. Some wear on the driver's seat bolster will be inevitable but make sure that the bolster itself



Buy on condition, not mileage. You may be surprised to discover that there are probably as many low mileage dogs as there are high mileage gems

## E39 M5 Options 2001

**STANDARD EQUIPMENT:** Electric heated M mirrors, electric heated sports seats, electric steel sunroof, quad exhausts, ten-speaker Hi-Fi system, M multi-function steering wheel, M sport suspension, front, side, head and rear side airbags, rear spoiler, six CD disc changer, tyre pressure control system, xenon headlights with wash system

### OPTIONS

**EXTENDED NAPPA HERITAGE LEATHER:** £1325

**FULL NAPPA POINT LEATHER:** £2895

**FULL NAPPA HERITAGE LEATHER:** £4220

**ALCANTARA HEADLINING:** £1035

**CLIMATE COMFORT WINDSCREEN:** £190

**CHROME LINE EXTERIOR:** No cost

**DELETE REAR SPOILER:** No cost

**DOUBLE GLAZING:** £680

**GRADUATED TINT WINDSCREEN:** £70

**HI-FI CD DRIVE:** £100

**HI-FI MINI DISC:** £295

**HI-FI PROFESSIONAL CD SYSTEM:** £685

**HI-FI INDIVIDUAL AUDIO:** £950

**NAVIGATION SYSTEM:** £2195

**ON BOARD MONITOR WITH TV:** £1650

**ELECTRIC GLASS SUNROOF:** £90

**INTEGRATED CHILD SEATS:** £260

**COMFORT SEATS:** £620

**ACTIVE FUNCTION (COMFORTS SEAT ONLY):** £395

**SECURITY GLAZING:** £1730

**SKI BAG:** £150

**SUN PROTECTION GLASS:** £210

**GSM TELEPHONE:** £925

**THROUGH LOAD FACILITY:** £250

**ELECTRIC REAR BLIND:** £230

**ELECTRIC REAR BLIND/MANUAL REAR SIDE:** £390

**COMMS PACK (GSM phone, Navigation, On-board monitor with TV and Text, Trafficmaster):** £3395

isn't too worn or saggy. While you're there check the seats' electrical adjustment feature still works.

And it's mainly the electrics that you'll be concentrating on with the interior of an E39, once you've established the leather's in fine fettle. Check the dash display pixels (and those on the radio display) as these have a habit of failing over time. It doesn't affect functionality but it does become an irritation when you can't read the display. It's not an expensive fix – a specialist pixel repair firm will do the repair on a dash pod for around £85 – but you would have to remove the cluster and post it to them unless you have a firm local to you. Alternatively you can buy the parts online and do the repair yourself if you're feeling intrepid... there are a host of YouTube videos showing how to do the repair.

Heater control modules can fail, which tends to lead to a HVAC system with a mind of its own, and ensure the air-con is correctly functioning as a seller's assertion that 'it just needs a regas' almost always means the dryer and condenser are 'fubar'd'. Budget on over £500 if both are required. Finally, check the door seals, especially the one around the driver's door as it tends to wear pretty rapidly. If an owner has replaced it, it shows a level of devotion to keeping their M5 in tip-top condition.

## Engine

Ah, the big one, the heart of the beast. If you delve into the forums on m5board.com you could come away believing BMW didn't really do all that good a job on the M5's power unit as you could be forgiven for thinking that there are a myriad of problems just waiting to rear their ugly heads the moment you sign on the dotted line. While it's true there are some common faults it's not unreliable per se but like any M unit it can be expensive when it does go wrong. As we've said before, if you're not sure, get a specialist to check a car for you before purchase as a diagnostic test may be very revealing.

Vanos are five seemingly random letters that strike fear into the heart of M owners but in reality the VArIable NOckenwellen Steuerung isn't that bad on the M5. It's just that if you do have problems and you're unfortunate enough to require new units they're seriously expensive – £2k a pop, and don't forget there are two...

Over the years BMW tweaked the system and depending on when your car was manufactured you may be able to get away with replacing parts of the Vanos rather than the complete unit. All Vanos units (no matter when the car was made) will be noisy on start up from cold, but the noise should go within

around 15 to 30 seconds. If it lasts much longer than that the chances are a replacement will be required in the near future. Preventative maintenance can involve stripping the units down and replacing the seals and there are now a number of specialist companies who deal almost exclusively with Vanos repairs.

Mass Air Flow meters (MAFs) are vital to the proper function of the S62 engine – they're located in the M5 air intake tubes and report to the DME control unit the amount of air that is drawn into the engine, and what temperature this air is. The DME uses this to calculate how much fuel to inject. They tend to get gunged up every 50,000 miles or so and gradually start to affect the engine's performance. Original BMW items are expensive – over £200 each – but many owners have replaced them with an identical Bosch part sourced from VW dealers which are considerably cheaper and appear to do just as good a job. Camshaft position sensors and crankshaft position sensors can also fail fairly regularly.

The issue of carbon build up hasn't really been an issue in the UK, although in North America it's been a hot topic for a number of years as the build up of carbon deposits in the secondary air system can bring on the 'Service Engine Soon' light which will lead to a failure of the emissions test in some US states' version





of the MoT test. However, some UK specialists are now seeing carbon build ups in UK cars that are throwing up all sorts of fault codes which generally point to failed sensors of one type or another; where these have been replaced and the engine still doesn't function properly, further investigation has revealed an excess of carbon in the secondary air system. Over time the carbon can completely block the secondary air system passageways including the head ports and the only way to fix the problem is to strip the cylinder heads and the secondary air system plumbing and clear out the carbon. As you'd expect, anything that involves removing the heads is going to give your bank manager heart palpitations.

Another problem that's developing are worn rod bearings in the bottom end. The number of failed bearings is relatively small given the number of S62s BMW made, although the chances are the first warning you'll get of the problem is when your engine's toast, although some do exhibit warning noises before failing. It does seem to be a problem

that affects machines that are revved excessively from cold, or those that have been modified with higher rev limits but if you do have a higher mileage machine we'd recommend replacing them if possible. Costs vary on how much other work you have done when the bottom end is exposed but budget upwards of about £1300.

Don't worry too much about oil consumption – in general all S62s like to sup a bit of Castrol from time to time and the earlier cars more so. A litre every 500 miles is not unusual. Later engines are said to be better as the piston ring design was changed in the early part of 2000, but some later engines do still burn oil. It's not something to be unduly worried about, just make sure you've always got a bottle of the correct oil in the car as it's not always easy to find the right grade when you're out and about.

Oil leaks are not unknown either. Oil filter housings can fail (often as a result of being incorrectly handled come service time), rocker cover gaskets tend to weep relatively regularly and sump gaskets also fail.

Lastly, budget for servicing. According to BMW's fixed price menu service system an Oil Service with Microfilter will cost £199, an Inspection 1 £320, and an Inspection II £540. We'd probably recommend going to a specialist, though, as they will see many more of these cars these days and be much more familiar with their common foibles.

## Transmission and drivetrain

Not too many concerns here as they're generally tough in this department with the gearbox itself doing sterling work and having very few issues. Having said that, our old editorial M5 did need a new 'box as it intermittently jumped out of third gear under hard acceleration which was very irritating...

The weak point, if there is one, is the clutch which can cry if it's regularly subjected to abuse. Be a little gentler and you should get good life out of one. Around £600 should see a new one installed but don't delay if you suspect the clutch is on its way out as a worn clutch will damage the flywheel, too.



## E39 M5

<b>ENGINE:</b> V8, quad-cam, 32-valve
<b>CAPACITY:</b> 4941cc
<b>BORE/STROKE:</b> 94x89mm
<b>COMPRESSION RATIO:</b> 11.0:1
<b>MAX POWER:</b> 400hp @ 6600rpm
<b>MAX TORQUE:</b> 369lb ft @ 3800rpm
<b>0-62MPH:</b> 5.3 seconds
<b>STANDING KILOMETRE:</b> 24.1 seconds
<b>50-75MPH (4TH GEAR):</b> 4.8 seconds
<b>TOP SPEED:</b> 155mph (limited)
<b>ECONOMY:</b> 20.3mpg
<b>DIMENSIONS (L/W/H):</b> 4784/1800/1432mm
<b>TRACK (F/R):</b> 1515/1527mm
<b>WHEELBASE:</b> 2830mm
<b>WEIGHT (EU):</b> 1795kg
<b>TRANSMISSION:</b> Getrag six-speed manual, 25 per cent LSD
<b>BRAKES:</b> Ventilated 345/328mm discs, single piston calipers, ABS
<b>STEERING:</b> Recirculating ball, Servotronic
<b>WHEELS &amp; TYRES:</b> M Double spoke Style 65 alloys
<b>FRONT:</b> 8x18-inch with 245/40 ZR18 tyres
<b>REAR:</b> 9.5x18-inch with 275/35 ZR18 tyres
<b>UK RHD IMPORTS:</b> 1952
<b>PRICE:</b> £60,000 (1998), £52,000 (2001)



Thanks to:  
M5 Portal  
[www.m5portal.com](http://www.m5portal.com)

Keep an eye on the diff seals as, like most BMWs, they tend to leak. A little dampness on the casing is okay – if it's wet get them attended to. Prop couplings can fail, usually indicated by a vibration at speed.

### Wheels, tyres and brakes

Again, no real horrors here, although if you drop your car off for a service and are told it needs pads and discs all-round and a full set of boots you'll be in for a wallet-wilting experience. Tyre wear will depend on how heavy your right foot is but around £750 will get you a set of four boots from a quality manufacturer such as Goodyear or Michelin. If the car has DitchFinder remolds fitted think about where else the owner might have been cutting corners.

Front pads should cost around £200 fitted, with rears around £170... considerably more if discs are required. Also remember to look for evidence that the brake fluid has been regularly replaced. ABS sensors have been known to fail and in the same area wheel bearings can get a bit grumbly over time but we

wouldn't say it's a desperately common fault.

Do examine the M Double Spoke alloys carefully as refurbishing them is costly and many companies struggle to get a good match for the chrome shadow finish. It's almost inevitable they will need doing at some point so look for some recommendations on the forums of places local to you who have done this type of wheel before. We'd advise against painting them black or going for a car with aftermarket alloys – M5s will be worth more if they are original.

### Steering and suspension

Like most heavy machines of this era it's almost inevitable that components will wear and fail over time so do have a look at a car's history to see what's been replaced in the past. If you can't see any evidence of new parts being required then budget on a big suspension refresh. Anti-roll bar links, thrust arm bushes and ball joints may all need doing while at the rear anti-roll bar brackets are notoriously weak and can be replaced with stronger modified examples.

Part of the joy of an E39 is its ability to be a back road blaster and a refined cruiser and this is down to the way BMW spec'd the suspension. Many aftermarket companies have tried to beat the OE setup and if you want a sharper handling machine then this is fine, but ultimately we'd replace tired dampers and worn springs with genuine BMW parts.

### Verdict

Buy a bad one and you'll almost certainly end up regretting buying an E39 M5, but do your homework carefully, look at as many as you can and enter into the relationship with open eyes (and a partially open wallet) and you should be able to revel in the joy of M5 ownership.

It's such a satisfying car to own – it does everything well and nothing badly – and its Jekyll and Hyde nature is one that you could argue has yet to be bettered from BMW or any other manufacturer. People are beginning to catch on, though, so make sure you bag a good one before it's too late! ●

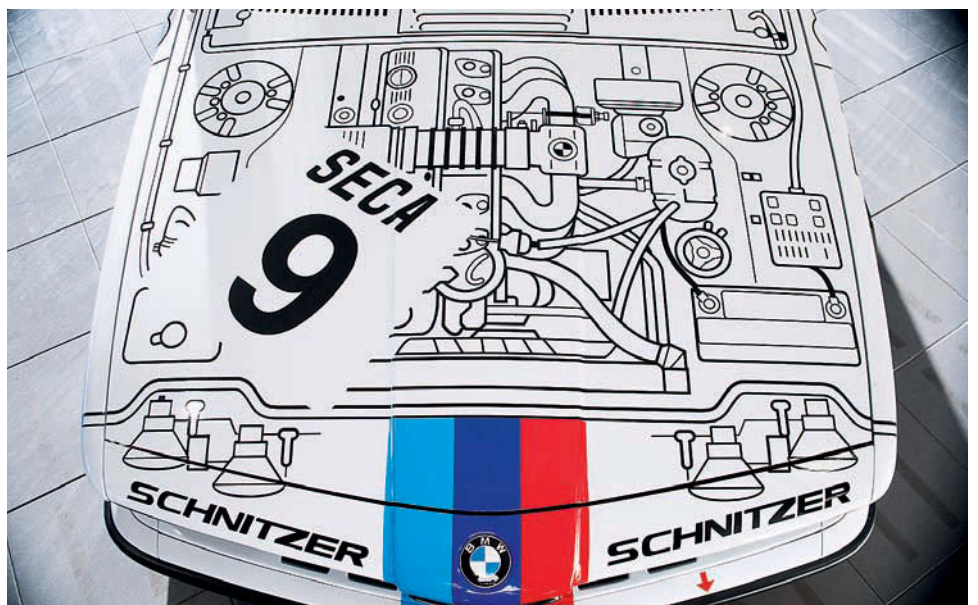
# 3½ Decades of BMW Motorsport in South Africa

## Part 2



We pick up the second half of this feature as Johann Venter interviews Evolution 2's Alec Cernich about some of his creations and the highs and lows of his involvement with BMW Motorsport

Words: Johann Venter Photography: Oliver Hirtenfelder





The Batmobile tribute you can see here was launched at the BMW Car Club Concours event in South Africa in 2012 to rapturous applause. Regular readers would have spotted it in the December 2012 issue of *BMW Car* thanks to the then deputy editor, Sebastian de Latour, who covered the Concours as part of his South African visit. Adrian Burford then took it around the Zwartkops Raceway and gave us his impressions in the March 2013 issue of *BMW Car* so it shouldn't need too much of an introduction. It is a homage to the Group 5 CSL that Hans Stuck raced in 1975 in the International Motor Sport Association (IMSA) Camel GT Series in the United States and is an absolutely glorious machine.

We asked Alec Cernich how the phenomenal build came about: "Paolo Cavalieri [the owner of the car], having raced BMWs, always lusted after one; in 2008 he acquired a Batmobile that had been raced before. Initial impressions were good but when we removed the aluminium sheeting from the floor panels there was nothing but rust. We needed a donor car and this came in the shape of a 2800CS. All the running gear from the racer was transplanted to the donor car and all the necessary fabrication done to transform it into a Batmobile. The heart of the beast had unfortunately given up the ghost due to timing-chain failure, we therefore needed a replacement in the form of a 3.5-litre M88 engine which we had sourced from an E28 M5."

While the Bat was built up in South Africa Alec did actually travel to Germany to conduct his own research in terms of executing this build, as he recounts: "The Batmobile has also resonated with me – it won several European Touring Car Championships in the '70s. I paid close attention to it when Jody Scheckter campaigned a Batmobile with Ronnie Peterson at Kyalami and won the 9-Hour. On previous trips to Munich I also poured over the detailing of the engineering on the Batmobile. Paolo was invited to debut his Ferrari F40 GTE at the 2011 Top Gear festival; he asked Evolution 2 Motorsport to prepare and maintain the car during the course of the Festival. As such, I accompanied Paolo to Bonini, a Ferrari specialist based in Cadelbosco di Sopra, near Reggio





Emilia, to gain first-hand insight as to how to setup Enzo's last creation in its most brutal form. For good measure we also popped into Maranello – you can never have enough instruction when it comes to setting up a race version of the F40.

"From Maranello we hopped onto a plane to Munich and straight to BMW Classic, armed with a camera and plenty of questions. From there we moved onto BMW Welt and then onto Schnitzer to speak directly to those that had prepared Batmobiles for battle, including my long-time colleague and friend Charlie Lamm. Paolo has been offered figures that I dare not even try to pronounce for the Bat but I don't think he will sell it. These cars are definitely in demand the world over, more so if they have some

form of racing pedigree." According to Alec, it's not a garage queen, either, having flexed its muscles on track: "This is no museum piece, it primarily takes part in historic racing events and Paolo has been challenged by Rui Campos [a local classic racer and collector] to race against his Porsche RSR replica."

While the Batmobile obviously grabs everyone's attention it's not the only E9 Coupé that we have here today. There's another less extreme example that belongs to Peter Kaye-Eddie who has been involved with BMW Motorsport in South Africa for a long time and featured heavily in last month's feature. "This car has come full circle," says Alec. "It was initially owned by John Meiring [another local racer] as a 3.0CSi road car. While he owned it Evolution 2

carried out all services and repairs. The car was then sold to Derrick Hulse [a historic race car collector] in Cape Town who converted it to a Group 1 spec race car. Peter bought the car from Derrick about two-and-a-half years ago and campaigned it in historic racing events with Graeme Nathan in the driver's seat. During the second heat at the Passion for Speed Festival at Kyalami in 2013 the engine suffered catastrophic failure destroying every component inside. We managed to find a M30 motor as used in the E32 735i and E34 535i from our neighbours, International Parts and Components based up the road at Kyalami Business Park. It specialises in importing used BMW parts from Japan." It might not be the first place that comes to mind for sourcing



used BMW parts but Alec explains the rationale behind buying from Japan: "Prices are reasonable and the parts are normally in good condition and it was no different with this engine. We stripped it down to inspect it and found it to be like new. The cylinder head was sent to Vanderlinde (racing family dynasty, 17-year-old Kelvin is the 2014 ADAC GT Masters champion) to be gas-flowed and a 282-degree billet cam was fitted. Vanderlinde also developed a custom exhaust system. Other custom components included a specially made flywheel which is significantly lighter than the standard item, a competition copper clutch, and the gearbox was rebuilt and the differential serviced. The engine was also fitted with a dry-sump plus a Powermods ECU was fitted and a remap done."

Jumping a few decades forward we turn our attention to the youngest car in this eclectic line-up, the E92 M3 GT, and Alec explains that this extreme machine actually started life as a road car: "It had a rear-end smash and was written off. Paolo was able to secure it through his insurance business in 2009 and commissioned us to transform it into a racer. I consulted Schnitzer regarding the build and it advised that the engine should be left alone together with the manifolds but that a racing exhaust should be fitted together with a high performance engine management system. That's exactly what we did. Some exhaust modifications were carried out, a sequential 'box fitted and a Motec ECU installed.

"We managed to achieve 388hp (290kW) initially and after further tweaks to the exhaust it increased to

442hp (330kW) which is not bad for a standard engine. It just goes to show how good these V8s are. When Anthony Taylor tested it at Zwartkops it managed 1.04min which is quick and it managed to win its class in the 2012 Pro Tour race series."

One of the more recent builds completed at Evolution 2 Motorsport is the E30 M3 Touring Car which was featured in the June 2014 issue of *BMW Car*. To quickly recap, South African race driver Farouk Dangor got Matt Neal (of BTCC fame) to find a BTCC M3 so that he could campaign it in the South African Touring Car Championship for the 1993 season. After the car had been retired from racing for a few years, Farouk commissioned his resident BMW mechanic to restore it to its former glory. What he got instead was really just a rolling chassis so Alec and his team were then called in to rescue this motorsport treasure – the only E30 M3 that was ever campaigned in a national racing championship on the African continent.

Alec was naturally delighted when he and his team were given the job of restoring the M3: "I've known Farouk for many years, I can recall how Tony Viana got him into Group N racing, and it really took guts in those days for a man of colour to enter into a whites-only racing arena. Farouk was not only competitive but won numerous races in his career even out-classing Works teams from time to time. I digress though; getting that call from Farouk was a lifelong dream come true. Ever since I'd seen Roberto Ravaglia's 1987 WTCC-winning car at Schnitzer, I've been wanting to get my hands on an E30 Touring Car. The

E30 was the most successful Touring Car ever and had it come to South Africa I am sure it would have been as dominant as it was in Europe."

This was however not Alec's first experience working on an E30 M3: "When I was at JSN we serviced an E30 M3 that was initially owned by the Chinese consulate. When Peter Southwood acquired it, to our delight he asked that we fit a Schnitzer stroke kit which comprised the crank, rods, pistons, cams and the cylinder head. It was the best road car I had ever driven – it was phenomenal." Interestingly Alec now regrets not trying to go for a larger capacity in Farouk's car: "I think we should have converted the spare engine that was available to a 2.5-litre instead of installing the 2.3-litre." You live and learn!

So far, though, while we've concentrated on some exquisite machinery none of them have been owned by Evolution 2 so it's time to discuss the final car, the 635CSi, which we're imagining will be the most special as it is the only car that Alec has built (over the last five years) that will remain with Evolution 2.

"This is, in fact, my son Bruce's car that we as a family developed together with my eldest son Gavin who was also very much part of the process," reveals Alec. "It is based on a Schnitzer car and built to FIA Group A specifications from the 1980s and decked out in the BMW Parts livery of the day. I do have a soft spot for these cars, I can remember seeing Schnitzer achieving a one, two at Monza and again at Silverstone where the 635s of the day managed to secure the top three places."



It's a stunning re-creation and looks very much like the real deal, which is what Alec was aiming for as he explains: "We tried to match it as closely as possible and even consulted with Wolfgang Schnitzler. He was responsible for the decals on the original BMW 635CSis and is currently responsible for all BMW Motorsport stickers, which included the F1 cars some years back. Charlie Lamm and the guys from Schnitzer were also a great help. I spent many hours at Schnitzer in Freilassing studying and documenting the 635s they have on show."

As we'll be running a full feature on this stunning E24 in a coming issue we don't want to give too much away about it here but Alec does tell us that there's still a little fine-tuning to be done before it can be used in anger: "There is some work that needs to be done to the brakes and the cooling system, so we haven't done the first shakedown but already we've had some very tempting offers. At this stage, however, it is not for sale. I will be over the moon the day I see it stampeding down the race track. That said, we will only put it on the track at very special events. It took five years but it feels like a lifetime has been invested into this car."

We move on from the cars themselves and pitch some questions at Alec about the highlights and the more challenging moments that he's faced in his career, including how he ended up opening his own workshop. One of the undoubted highlights while working for BMW South Africa was being trained to service the M1, as Alec recounts: "Going to Germany



Alec and Evolution 2 Motorsport have been responsible for some stunning machinery over the years and the Farouk Dangor E30 M3 which it restored has to be one of the best. Below is the fantastic recreation of the BMW Original Parts 635CSi race car that Evolution 2 has spent the best part of five years creating... keep your eyes peeled for a full feature on this superb homage to the original in a coming issue





in 1981 to be trained on servicing and maintaining the M1 (of which 14 were brought to South Africa to be serviced at selected dealerships of which JSN was one) was definitely a high point. I did three more trips to Germany for training while with BMW SA and one trip with my wife which I received as a reward for being the best district service manager for South Africa. We spent five days in Munich and did a tour of Austria and Switzerland in an E28 525i that we were given. When we returned to Munich we flew to the UK for the 1983 British Grand Prix."

As we saw last month, after working for BMW South Africa Alec moved onto a service manager role at JSN Motors in Johannesburg and he remembers his time there fondly: "The people that I worked with were great – Johnny [JSN's founder] might have been difficult but he taught me about business, life and the motor industry from a retail perspective as well as from a racing perspective. We also won three dealer service awards in a row."

Alec's true passion, though, is motorsport and we asked him about the best memories he has on

occasions when he was actively involved: "Motorsport in South Africa, like elsewhere in the world, has become a corporate machine. Back then there were many dealers such as Club Motors, Auto Atlantic, Marnewicks, and Forsdicks actively sponsoring and supporting private race teams. The competition, however, really intensified when JSN became a major sponsor. The best feeling it has to be said was beating the factory teams with fewer resources and only having the opportunity to work and prepare cars after the working day ended."

While there were plenty of highs for Alec there were some tough moments, too, as he recalls: "There was a lot of politics involved – especially when we won races. In 1986 we were disqualified at Kyalami for lower control arm suspension bushes which we had ordered from the BMW factory. Robbi was then suspended from three races (at Kyalami only), he lost the championship that year by one point to Tony Viana. In 1995, at the Zwartkops, Robbi secured both races but was disqualified due to an anti-roll bar which was found to be 2mm too thick, I wonder how they

figured that out?"

While race politics are something teams the world over have to deal with Alec was fortunate to have worked and competed with some of the best drivers in a generation, so we ask him who would he single out and why? "I worked with Robbi [Smith] for the longest, and we've been friends since 1976. Geoff Goddard who was an engineer by profession; he had superior technical knowledge and always assisted even in the days when we were racing against the factory team. We'd phone him and he would assist which gave us (Peter Kaye-Eddie/JSN) the edge over other privateers; he was our inside man. There were big names in motorsport in those days Sarel van der Merwe, Terry Moss, Tony Viana, Eddie Keizan, Paddy Driver and Graham Duxbury."

For the past 18 years Alec Ceprnich has been the boss at Evolution 2 Motorsport and we ask him what his motivation was for starting his own business? "In 1994 Johan van der Walt of BMW SA asked me to rejoin as the group service manager of the Auto Bavaria Group which comprised four dealerships and

"Going to Germany in 1981 to be trained on servicing and maintaining the M1 was definitely a high point"





The E92 M3 race car might be the newest machine in this eclectic array of Bavarian metal we've assembled for this feature but it's an impressive machine nonetheless. Alec consulted with Schnitzer Motorsport on the best way of extracting more power from the V8 and it advised to leave the internals as standard but to work on the exhaust and engine management side. It now develops just shy of 450hp at the wheels which is an impressive achievement

a body repair shop owned by BMW SA. It only lasted for 18 months as the Dealer Council forced BMW SA to close these dealerships. BMW SA wanted to redeploy me back to the Rosslyn plant – that was not an option for me. I started Evolutions 2 Motorsport in late 1996, working from Peter Kaye-Eddie's home in Norwood. When I started the business it was primarily to prepare and manage cars for racing. At the time Peter Kaye-Eddie had four BMWs that he was campaigning. I was not, however, only looking after his cars. There were various VW Polos that participated in the Polo Cup and three Porsche 924s which were built and race prepared by Paddy O' Sullivan which I assisted with.

"In April 1997 I opened the business at the current premises. Times have changed since and I could not survive primarily on preparing race cars. In fact, today servicing and maintaining road cars is our prime business and we prepare, restore and build race cars virtually in our spare time. I would much rather however be preparing and restoring race cars."

The company name reflects Alec's passion for

motorsport, as he explains: "It is based on the second version of the E30 325iS which is commonly known as the Evolution 2. I also found a company in the UK called Evolution 2 Motorsport doing very good body kits: Schnitzer, Zender, Hartge, Kelleners etc. I called it up and asked if it would be okay with me using the name and it suggested that I became the company's South African agent but shortly thereafter it switched to doing solely Ferraris."

Since opening his business it's gone from strength to strength. We ask Alec what he attributes this to? "Experience and expertise, coupled with a talented team plus having the right contacts within the industry – dealer network, BMW SA and Schnitzer," he replies. "We have two very talented mechanics: Wade Noble has been with us for eight years. Besides the day-to-day servicing and maintenance of road cars his main accomplishments include being the lead on the restoration of the E30 Shadowline that was raced by Tony Viana and the 635. He also assisted with the 745i and E36 racers. Then we have Wynand Durand who is in his fifth year. His first major build was the

E92 M3 GT, and he led work on the Batmobile, the E30 M3 Touring Car and the Taylor E46."

From this excellent base we can only see Evolution 2 Motorsport moving onwards and upwards. However, we ask whether Alec would like to be doing more builds and restorations? "I've setup a work space on the side of the workshop with the hope of doing what I enjoy most, namely building racing engines. Peter Kaye-Eddie has an E12 530 with some racing pedigree that he wants us to restore. Peter also wants us to develop a second E12 530 road car into a racer. Stavros from JSN has also indicated that he wants us to restore the 325i Shadowline and the 325iS. There is also the possibility of restoring the modified E23 745i that Tony raced."

And as a final question we can't resist asking what Alec's dream BMW build or restoration? He replies with a grin: "A genuine M1 Procar." A true BMW man through and through ●

**SPECIAL THANKS TO:**  
Ron Sike



# WHAT'S IN YOUR GARAGE?

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## We meet one man who has had plenty of modern BMWs over the years, but has lately turned his attentions to some modern classics, along with an X5 for his wife...

Words: Simon Holmes Photography: Steve Hall

As you might imagine, we tend to meet plenty of loyal BMW enthusiasts when doing these *What's in your Garage?* features. And whilst slowly perusing these fine collections, it's always interesting to listen to the owner's story. It's the tale of how they became so enchanted by the Bavarian brand that they couldn't help having more than one in their possession and their tale is usually centred around a single, key piece of information that inspired them. It frequently tends to be either a taste or trait picked up or passed on from someone else or a fond memory or experience growing up. Talking to Steve Pearcy, the proud owner of the cars pictured here, he mentions

that he has early memories of BMWs, but that doesn't fully explain why he's since owned 14 BMWs over the last two decades or so!

"My dad was a mechanic for many years and always had cars around ever since I was young, so I've always been interested in anything with wheels," he recalls. "I remember a friend of my dad's, a vicar in fact, who had a 2002tii and a damaged 2002 turbo at his house and I used to sit in them when we visited."

Although that got him started with cars that wasn't enough to ignite his passion for BMWs. Instead, that side of things came later, after Steve had learnt to drive and he happened to have a good friend that gave him an experience of the brand that left a mark,

as he explains: "My friend worked for a BMW main dealer years ago and he used to let me borrow loan cars on a regular basis. I was allowed to borrow anything and in my early 20s I was often driving around in new M3s or M5s and I even borrowed an 8 Series, which was a very expensive car back then."

It was enough to convince Steve that BMW was the marque he wanted to drive from then on and after savouring his loan cars he took the plunge and actually bought a BMW for himself. But his long-lasting relationship began with more humble beginnings in the shape of an E36 318is that was a few years old. He then moved on to a second-hand six-cylinder 323i Coupé and then an E46 330i before treating himself





to a brand-new 330Ci M Sport in 2003. By then he was well and truly hooked and over the next few years Steve side-stepped his way through a vast array of BMWs, covering just about every kind of model in the range from the last decade or so, ranging from a E63 645Ci to a Phoenix yellow E46 M3. He even convinced his loving wife to embrace the brand so there were often two BMWs parked in the driveway.

Then, after a few years, when Steve's kids had grown up a bit and the family moved to a house much closer to his place of work, Steve decided he didn't need an everyday car anymore. This was no bad thing as, instead, it meant that he could indulge his passion for older and slightly less practical everyday cars, namely BMWs from the 1980s.

"When I moved I got the bug for classics, or modern classics as you might call them. These were the kinds of cars I wanted when I was younger but couldn't afford," he recalls. "After a while of looking I mentioned to my wife that I wanted to buy a 635CSi as I had liked them since I was a teenager. It had to be a Highline, as although I would have loved an M635 they had started going for much more money, so this seemed like the next best thing."

Steve began scouting the internet for suitable cars and being a bit of a perfectionist at heart he wanted a good, clean example. He soon found this fine example for sale at a classic car dealer that tended to deal in high-end cars and although it was the first he went to see, he ended up taking it home.

With just 57,000 miles under its belt it was in fantastic condition, having been treated to a restoration in the past but there was still a couple of



**"My wife had wanted an X5 since the first model came out so when I got my 635CSi I thought it was fair we bought her one"**

niggly things it wanted: "Just little bits like the odd suspension drop links and pitman arms needed doing and it was on 8 Series wheels when I got it, so I found a set of genuine TRXs and sourced some tyres as I wanted it to look original."

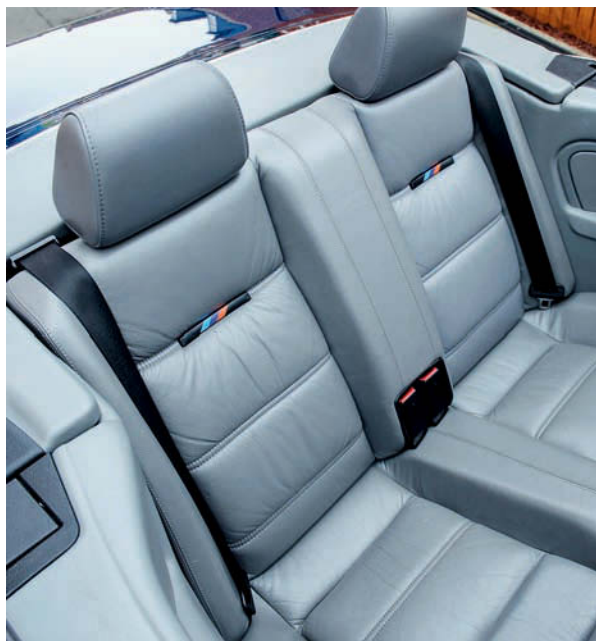
A set of replacement roundels were also fitted to freshen up the details and keen to keep it looking neat and tidy in the right places, Steve also smartened up the engine bay by painting the rocker cover and re-wrapping the wiring loom among some other intricate details. But although Steve likes the car to be right, that's not to say it's just a garage queen that lives its life behind a closed door. Instead, Steve chooses to enjoy it at his leisure: "I use it on Sundays to take the kids somewhere or sometimes I take it on a jaunt to nowhere. I do a 50-mile drive in it just for the sake of it. I do also take it to the odd show."

With a modern classic parked in the garage to keep Steve happy, next came the 2013 E70 X5, which joined the household some 18 months ago. This Alpine white M Sport xDrive30d was bought brand-new from the dealer and it joins the 6 Series as a compromise to his understanding wife, Kerry. "My wife had always wanted an X5 since it was launched and as she supported my many BMW purchases over the years it was only fair we bought her one."

It's obviously a very different car to the Six and although Steve still drives it from time to time he's happier behind the wheel of his own classic car.

After a few months of 6 Series ownership the car was in fine form and together with a new X5 on the driveway that meant his wife was happy, all was well in the Percy household. But then the idea soon





came about to give Steve's beloved 6 Series a companion in the empty spot next to it in the garage... "I had spent about nine months tinkering away with the Six and got it to the point where I was happy, but then I found myself with some free time. So it seemed like a good time to move on to something else and I began looking at another car I wanted as a teenager; an E30 3 Series."

To be more precise, Steve wanted an E30 Convertible and he had some requirements to fulfill, too. "It needed to be in good condition," he informs us. "It needed to be a six-cylinder and it needed to be in a less popular colour as I wanted it to be different. And I wanted a convertible as I'd not owned one before so I felt I needed to get it out of my system."

When this fine example came up it fitted the bill perfectly; a clean 325i automatic with just 67,003 miles on it and finished in rare Atlantis blue. And as a plus point it had the manual roof Steve preferred as he didn't want the associated issues that can arise with an electric one. The car was tracked down on the internet classifieds and it all seemed ideal except for the small fact that it was located some 320 miles away in Scotland! But Steve felt it was a good car with an honest seller, and when he asked for more photos and information and the owner promptly sent him a few dozen detailed images. That was enough to warrant making the trip up north to see it.

"It did look good and ticked all the right boxes, so I took a risk on it and went on the train up there to see it," Steve recalls. "The owner had told me it was immaculate and when I got there it was, so I bought it there and then and drove it home. I seem to have a knack for buying cars and getting lucky. Both were the first I had seen in the flesh and being old cars there is a risk but they have turned out to be good cars."

Again, like his 6 Series, Steve wanted his new purchase to be perfect and original so the aftermarket exhaust system and clear indicator lenses that had been fitted were hastily replaced with standard items. Then it was a matter of addressing the small but annoying issues. "The car needed drop links, the rocker cover painting and the diff oil seals replacing, but I do little bits like that in my garage," says Steve.

Much like the Six, the car has since been put to good, leisurely use and the roof is folded down regularly although with the weather turning colder the car will be parked up for its winter hibernation next to the 635 in the garage, both under tailored car covers.

Steve is clearly passionate about his cars but it's easy to tell from speaking to him that the big, white 6 Series is his personal favourite. "I prefer older cars, they drive with more character," he enthuses. "These cars are my pride and joy and the 325i is nice to drive but the 635 is so much smoother, you can tell straight away it's a GT car. It would take a lot to make me sell it. But it's great to open the garage door and have a choice and on a hot day the roof comes down on the E30 and I'll use that. I love my cars and I don't ever put my foot down in them, I just enjoy them. They are tucked away, maintained and looked after."

So are there any plans to expand the collection further? Aside from the lack of garage space to actually house any more, that's not stopped Steve thinking ahead and mentions he would love to own a 3.0CSL or a 2002 Turbo one day. "They are my ideal cars but I know they are probably out of my reach," he confesses. "We are currently looking at an X5 replacement in the form of a 430d M Sport in Estoril blue and I have a cheeky eye on a certain black E28 M535i on a specialist classic BMW website".

One thing seems to be for sure and that's the current modern classics residing in this garage won't be going anywhere for a while. And now we know the reason why Steve likes his BMWs so much... ●



Steve also has a passion for drawing cars, trucks and bikes and these have developed into a portfolio that inevitably contains many BMWs. These can be viewed at: [www.redbubble.com/people/mrstevepearcy](http://www.redbubble.com/people/mrstevepearcy)



# Tech Focus: Automatic **Transmissions**

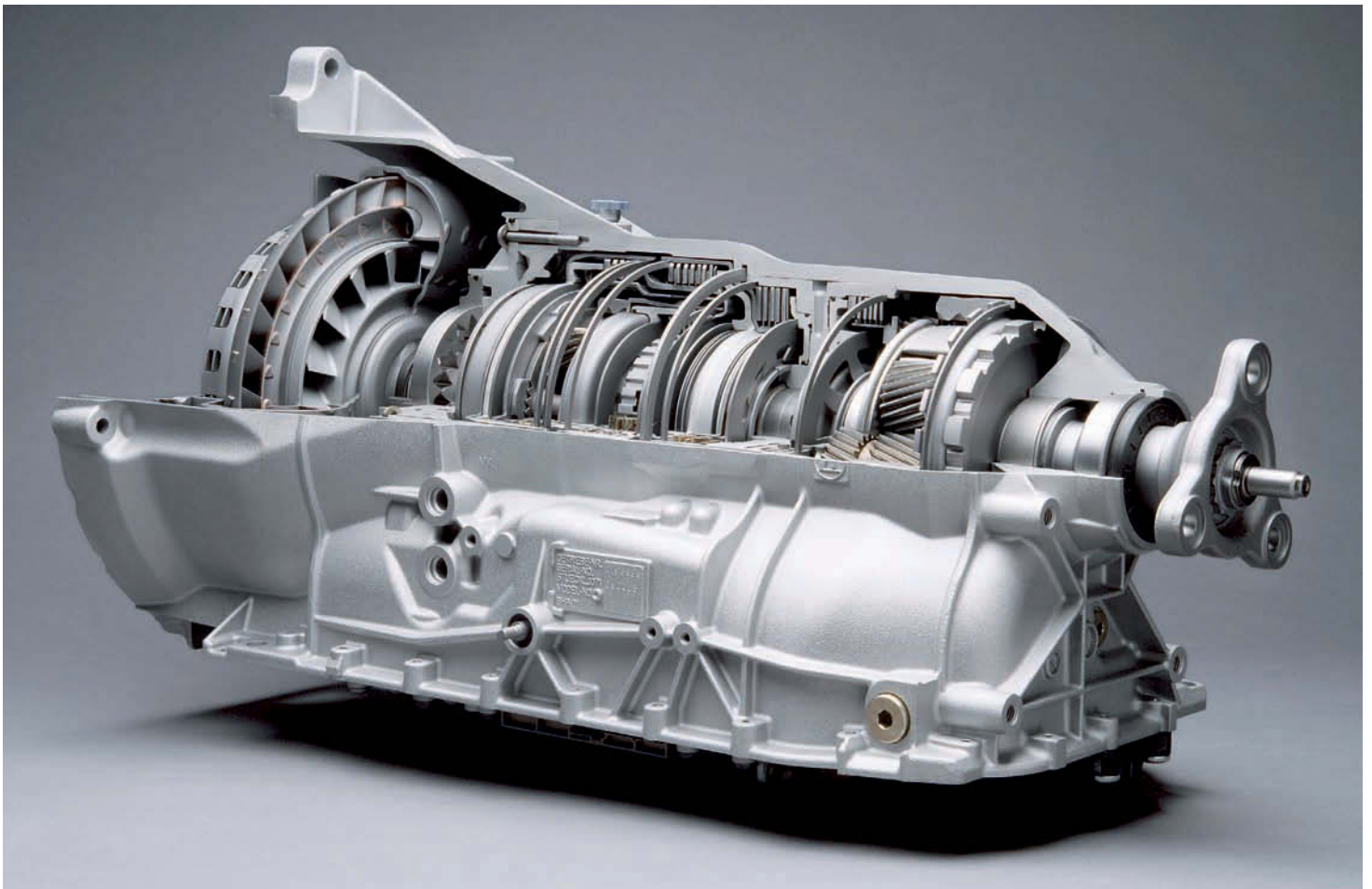
**This month we take a look at the automatic transmission, which for the first time has recently become a better-performing option than the manual gearbox...**

Words: Simon Holmes Photography: BMW

For years BMW has used automatic gearboxes and for years manual transmissions have outperformed them in both efficiency and performance. But with the introduction of the current eight-speed unit things changed. For the first time, it was the automatic versions that posted better MPG and 0-62mph figures, leaving manuals the more involving but outdated option. Technology had finally caught up and overtaken the

manual counterpart but although the latest automatics have taken a massive leap forward the truth is little has actually changed. Their design has simply been thoroughly refined and the use of electronics has made it work more efficiently.

So here we will take a look at the automatic gearbox, the basics of how it works, its history with BMW, why they have improved in recent times and what's most likely next in store...



## How does it work?

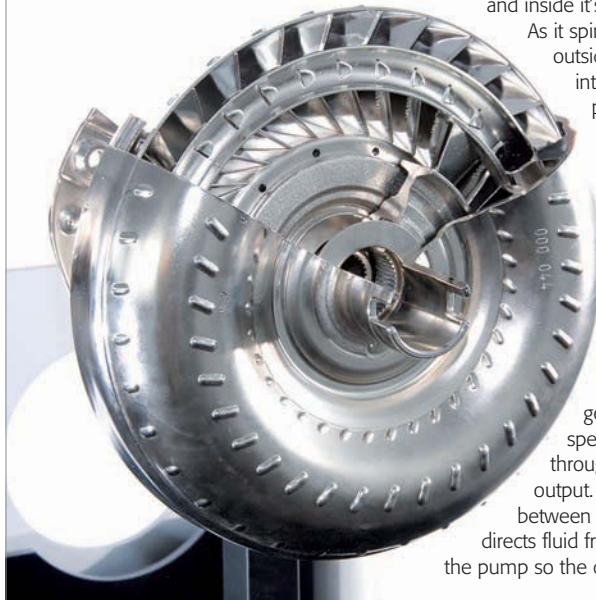
An automatic gearbox effectively does the same job as a manual one by supplying a selectable range of gear ratios between the engine and the wheels. However, there are key differences in their methods. For a start, a manual gearbox physically moves between gears to select them whereas an automatic simply utilises different combinations of parts that are already connected to give the desired ratio. In its most basic form, the whole setup revolves around a planetary gear set, which sits in the centre of the gearbox whilst the other parts work around it. The gear set is made up of the central sun gear and what are known as planet gears and a carrier that then rotates around it within a larger outside ring gear housing.

There are a series of clutches and bands in place that then clamp down to stop movement of the parts that make up the gearset or open up to allow it. The gearbox is then able to switch between gear ratios by altering whether each of these parts remain stationary or receive input and/or output. The clutches that restrict or allow movement to the gearset are controlled using hydraulics that are governed by valve bodies. Until recently, these valves were all pressure controlled but modern automatics tend to use more complex electro-mechanical servos to control the valve bodies and these, in turn, are controlled by a computer. Of course it gets more complicated the more gears there are; for example, BMW's eight-speed uses four planetary gear sets and five shift elements made up of two brakes and three clutches!

## What is a torque converter?

A manual transmission uses a clutch whereas an automatic uses a torque converter. Its job is the same: to allow the engine's flywheel to rotate when the gearbox doesn't have to, such as when the car is stationary. Again, it's a fairly complex piece of engineering but it essentially works using a basic principle: centrifugal force. The torque converter's housing is bolted directly to the engine's flywheel so that it rotates in relation to engine speed and inside it's filled with transmission fluid.

As it spins, the fluid is thrown to the outside of the housing and forced into a set of fins that act as a pump, pushing the fluid back towards the centre of the torque converter. Located in the centre is a turbine, which is connected directly to the gearbox and acts as the output. As the fluid passes through the turbine its direction is changed in order to absorb the energy and it begins to rotate, sending that movement along into the gearbox. The faster the engine speed the more fluid passes through the turbine, creating more output. A device called a stator, housed between the turbine and pump, then directs fluid from the turbine and back into the pump so the cycle can begin again.



## Is an automatic better than a manual gearbox?

Before the highly refined and advanced eight-speed came along this was generally pretty simple to answer. As good as they were for the time, up until then automatic gearboxes didn't offer any significant benefit other than ease of use thanks to the lack of clutch pedal. Over a manual they decreased fuel economy and acceleration times due to their inability to take off from a standing start with real pace, coupled with lethargic gear changes. The automatics were also slow to react to driver input a lot of the time, and the jump between ratios meant you could sometimes be caught out when you needed it most. The other main concern is the general lack of driver involvement once the clutch pedal and ability to select gears is removed and although that may have suited someone with a 750i in traffic, it wasn't ideal for a 325i owner who wanted to enjoy a country B-road.

So what's changed? Advances in technology have meant that automatics have got better at what they do. For a start, the latest ZF-built eight-speed is constructed from lighter materials and it's been redesigned to vastly reduce internal drag losses. A simpler shifting operation also means it's possible to skip gears completely on downshifts. All of these things help efficiency, and therefore fuel economy, massively. Furthermore, the electronically-controlled intelligent shifting patterns have also improved and the increase in the number of gear ratios to choose from ensures the engine is always performing at its optimum. Simple changes but they make all the difference. Whether that makes it better than a manual is a matter of opinion as there's still a lack of driver involvement to contend with but it's certainly a more even argument now.

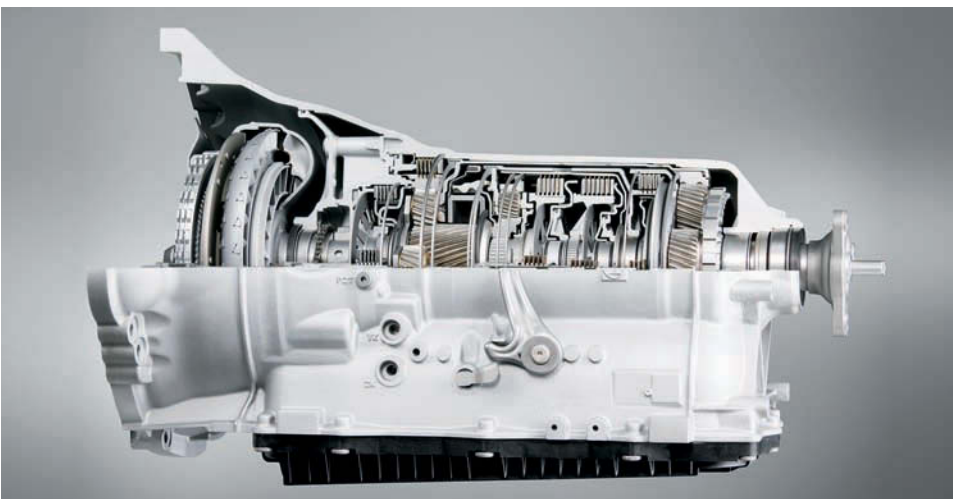
## Developments over the years

The automatic gearbox has been around for many decades but BMW didn't start using it until the 'New Class' arrived in the 1960s. Back then it was possible to order an 1800, 2002 or 2000c Coupé with a three-speed automatic, which was built by ZF, a major producer of gearboxes that still provides transmissions for BMW today.

Although it was revised, the three-speed automatic remained the only option until the mid-1980s, when finally a four-speed automatic replaced it and was offered across the entire range. Soon after a Switchable version became an optional extra which allowed the driver to alter the gearbox's changing characteristics between Sport and Economy via a dial mounted by the gear selector. During the 1980s the four-speeds were considered state-of-the-art and the best of their type on the market.

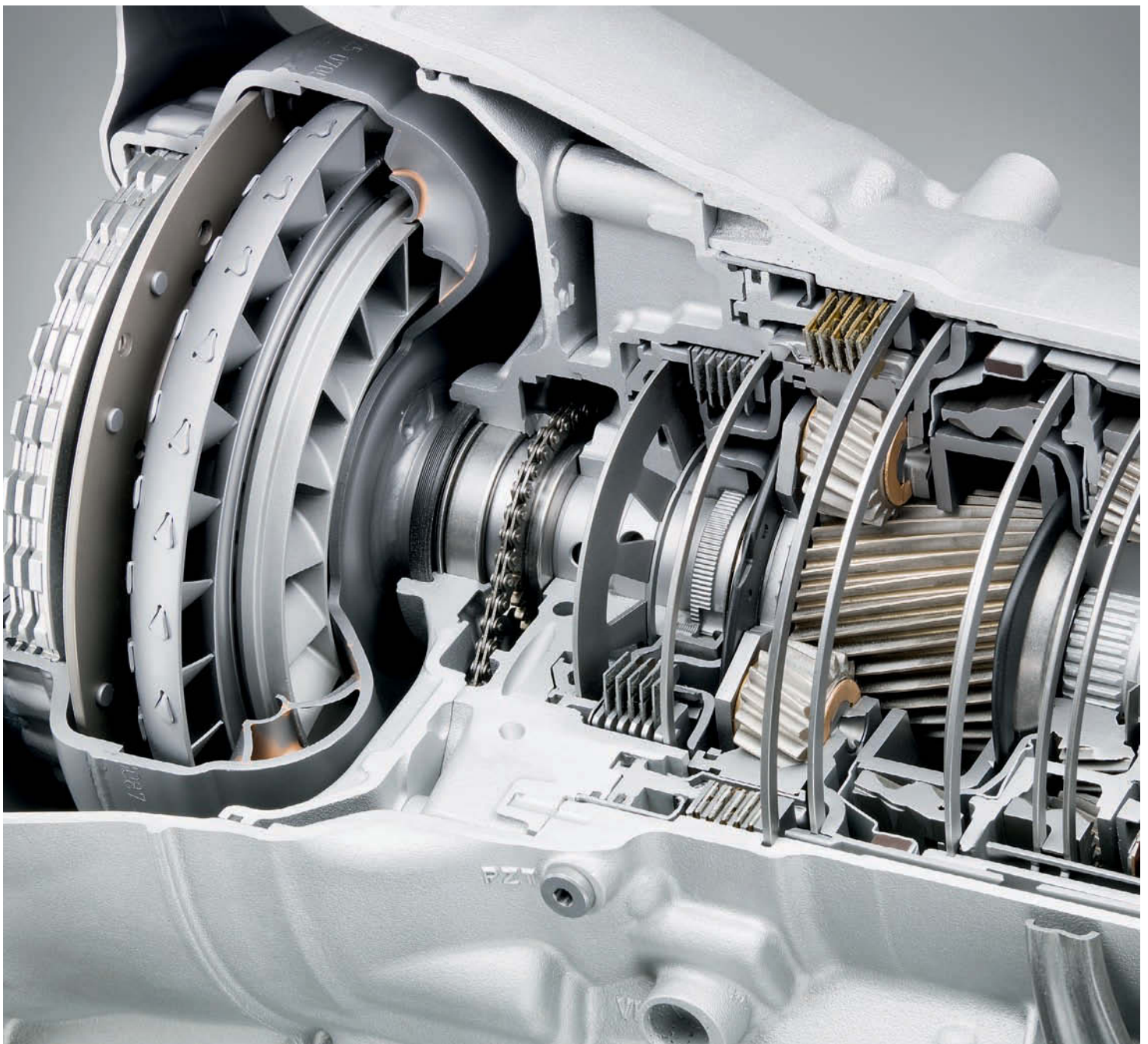
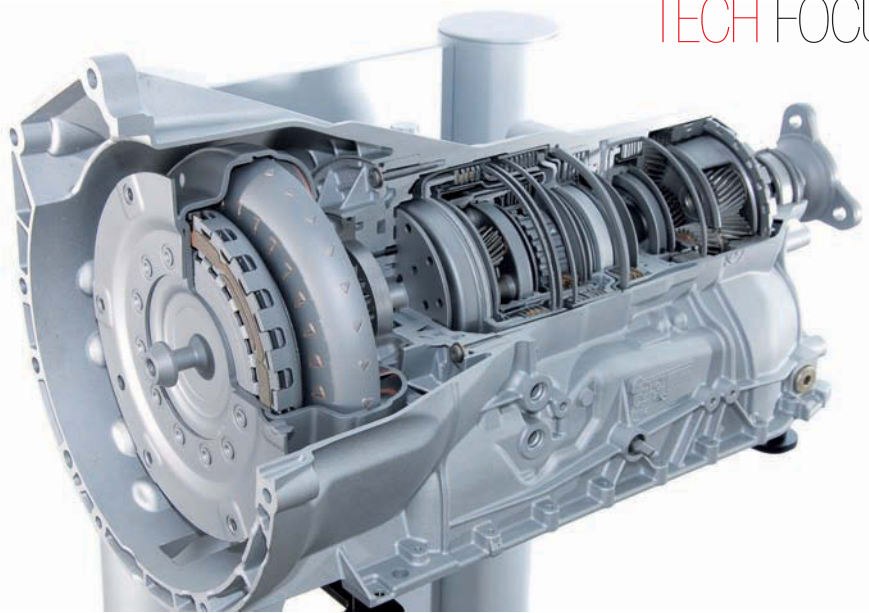
In the early 1990s a five-speed automatic arrived for the big BMWs and the next significant jump forward came a few years later with the introduction of Steptronic. This meant the driver could manually select gears like a kind of half-manual, half-automatic hybrid.

A six-speed finally arrived in 2001 with the new E65 7 Series and by this time electronics were playing a much bigger part to ensure smoother operation and optimum gear changes for both performance and fuel efficiency. However, the six-speed didn't filter down to other models until later. It then took BMW up to 2008 when it skipped a seven-speed and jumped straight into the eight-speed we have now. As a side note, it's worth mentioning that the seven-speed M DCT gearbox found in the M3, M4, M5 and M6 is not an automatic but a vastly different double-clutch gearbox, something we covered in detail in a *Tech Focus* back in April 2014.



## What's next for automatic gearboxes?

It seems that for now, at least, BMW has taken the automatic gearbox about as far as it is willing to go. Although its rivals may be soon offering even more gears, BMW say it has already been testing the theory that 'more is better' and it's currently not a worthwhile enterprise. It's all to do with efficiency gains versus the cost of the development. Testing has shown that changing from a six-speed to an eight-speed gearbox gained between five and ten per cent efficiency but the difference in efficiency between an eight-speed and nine-speed is less than one per cent, making it hard to justify. Adding another gear would also add unwanted weight, so for the time being the great eight will be staying put.



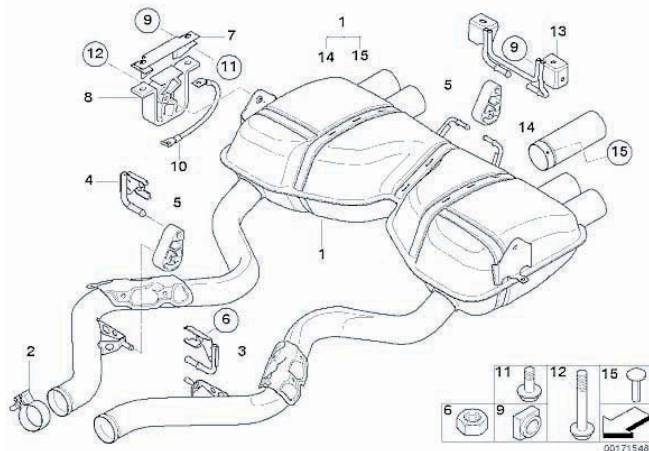
# What's involved?

## E92 M3 exhaust upgrades

As part of a new series we will look at the ins and outs of various popular upgrades for your BMW, starting with off-the-shelf E92 M3 exhaust upgrades...

Words: Simon Holmes Photography: Various





## What is an M3 exhaust made up of?

### Manifolds (not shown):

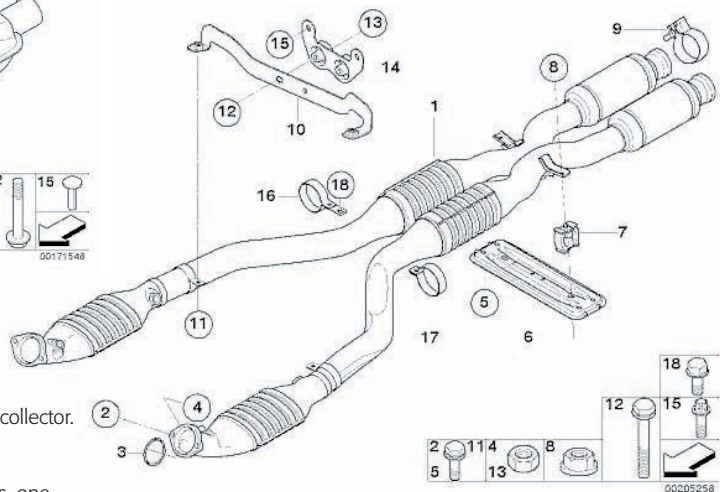
Being a V8 the exhaust gasses exit each side of the engine and pass into a manifold that immediately merges into a single collector.

### Primary cats:

The collectors are joined via a two-bolt flange to the primary cats, one for each side. This is where the four oxygen sensors are also housed.

### X-pipe and secondary cats:

The exhaust is then made up of an X-pipe which, as the name suggests, brings the two pipes running from either side together to meet in the middle before branching off separately again. The secondary cats are mounted just before the middle and a pair of resonators to reduce noise are mounted just after it.



### Rear section:

The two separate pipes then bend their way past the rear axle and into a large rear back box. Inside, the pipes change sides by passing through sealed Helmholtz and absorption chambers, both packed with insulation to reduce sound and drone further. The gasses finally exit to the atmosphere via the quad tailpipes.

The S65 V8 engine fitted to the E92 M3 was undoubtedly one of BMW's finest hours. Its power delivery and high-revving nature made the car truly something special to drive. And then there was the noise. There's no petrolhead on this planet that doesn't appreciate the composed, orchestral howl that a screaming V8 emits at high revs.

That meant aftermarket exhaust systems that were even louder soon began to appear and since then plenty of companies have begun offering a replacement exhaust system, or at least part of a full system, to suit your

needs. There's more than one reason to fit an exhaust to an M3 of course; an increase in power, improved looks or the weight saving offered by lightweight exhausts are all potential benefits of fitting aftermarket exhaust.

However, there are downsides and things to watch out for. For instance, it's worth considering that if you use the car everyday perhaps you don't want it too loud, and with two sets of catalytic converters (cats) fitted you certainly don't want a car that no longer passes an MoT test.

So here we will take a look at what's available off-the-shelf and why it's better to leave some parts of the complex exhaust system alone...

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## What are the options?

Depending on what you want from an exhaust it's possible to change certain parts to meet your requirements. Here's a run-down of what you change and whether you should...

### Exhaust manifolds/headers:

The original design is actually very good and it flows well, causing little restriction. As a result there are very few options on the market to replace the manifolds, or headers as they are known in America. The few options that are available are expensive and for the limited gains they are rarely changed.

### Primary cat delete/test pipes:

The primary cats are the most restrictive part of the exhaust system and replacing them with straight pipes releases the biggest gains in terms of power. The pipes can then mate to standard or aftermarket X-pipes. However, removing these cats will automatically fail a UK MoT test and the engine management light will trigger, although there are ways to turn that off.

### Full systems:

A full system will include replacement X-pipes and a rear section. This effectively replaces everything from the primary cats back, although some aftermarket X-pipes incorporate built-in primary cat delete pipes. As the secondary cats are mounted in the X-pipes, UK owners will need to ensure sports cats are fitted to pass an MoT.

### Sports cats:

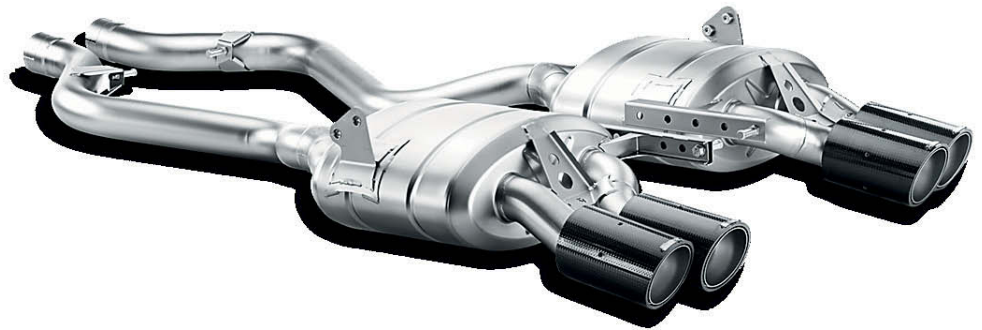
Visual checks to see if cats are still present are now part of the UK MoT, so to improve the exhaust and ensure it's all above board replacement sports cats are required. As you would expect, a sports cat is a less restrictive, lower cell count version of the original, meaning it does virtually the same job without disrupting flow as much.

### Cat back/back boxes:

To avoid any problems with engine lights or MoT tests the safe option is to fit a replacement exhaust from just the X-pipes back. This means the original primary and secondary cats are left well alone. However, this will give a much milder improvement in power and noise compared to a full system. The top of the range back boxes have an active valve to alter the amount of noise.

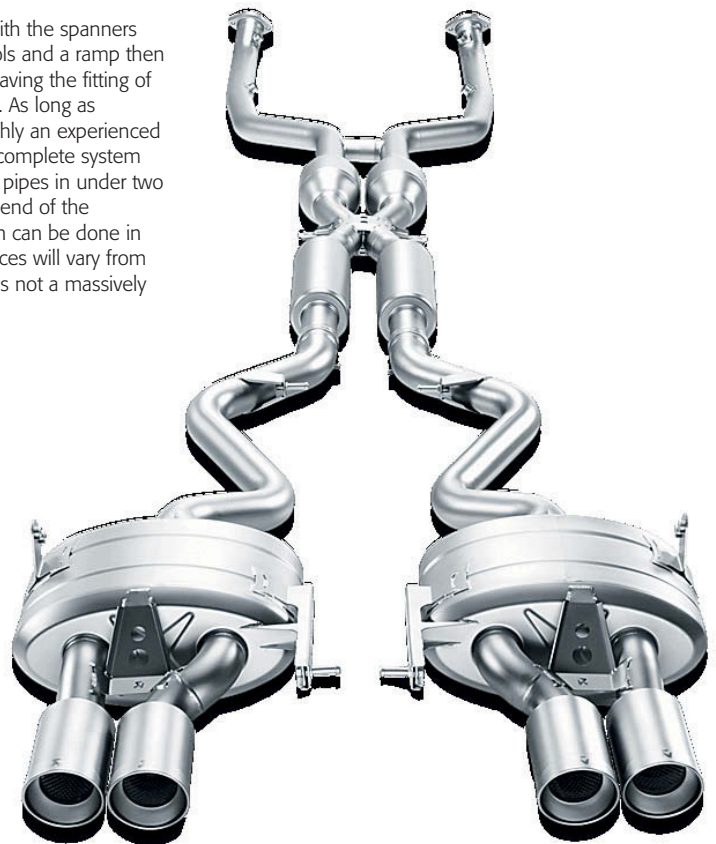
### Tailpipes:

If you're just after a better look at the rear then it's possible to replace the tailpipes alone as the originals are not welded to the back box but held in place with four rivets. They won't alter the sound though.



## Fitting

Unless you're handy with the spanners and have access to tools and a ramp then it's probably best off leaving the fitting of an exhaust to a garage. As long as everything goes smoothly an experienced mechanic should fit a complete system and primary cat delete pipes in under two hours. At the opposite end of the spectrum a rear section can be done in well under an hour. Prices will vary from garage to garage but it's not a massively labour-intensive job.



## The engine management light, emissions and the MoT

A light on the dashboard will definitely trigger if the primary cats are removed and the oxygen sensors are left out. Also, even with the oxygen sensors reattached into a cat delete pipe the light will sometimes trigger as it reads unusual amounts of flow. There have been reports we've come across of the light coming on after X-pipes have been fitted but this will be a faulty oxygen sensor that was already on its way out and most likely disturbed or knocked during the fitting process.

If you do away with the oxygen sensors and/or want to turn the light off you do have options. An engine remap will remove the light permanently, which is worth considering as it also gives a few extra horsepower to compliment the exhaust. Otherwise, there are ways of stopping the light from registering, such as Akrapovic's delete cable that plugs into the OBD port.

As for the MoT and emissions, the only way to pass a UK MoT test with an off-the-shelf aftermarket exhaust is by using sports cats. It's nothing to do with emissions either, as plenty of owners have reported passing emissions tests without the cats before. Instead, it's to do with the visual check the MoT tester does to see if the cat is still present as the MoT manual states "a catalytic converter missing where one was fitted as standard" is a reason for rejection.

## Where can I buy an aftermarket exhaust?

There are plenty of companies on the market and the power increase, sound, look and feel varies between them and will appeal to different tastes.

**AC Schnitzer** – [www.ac-schnitzer.co.uk](http://www.ac-schnitzer.co.uk)

Cat-back system – £1995

**Akrapovic** – [www.peron-akrapovic.co.uk](http://www.peron-akrapovic.co.uk) or [www.akrapovic.com](http://www.akrapovic.com)

Cat-back system – from £2866

Full system with primary cat delete, 100-cell secondary sports cats – £4761

**Bastuck** – [www.bastuck.com](http://www.bastuck.com)

Cat-back system – POA

**Borla** – [www.borla.com](http://www.borla.com)

Cat-back system – from £877

X-pipes with secondary cat delete – £960

**BMW M Performance** – from BMW main dealers

Cat-back system – £2900

**Dinan** – [www.dinancars.com](http://www.dinancars.com)

Cat-back system – £1566

X-pipes with secondary cat delete – £1254

**Eisenmann** – [www.eisenmann-sportauspuff.de](http://www.eisenmann-sportauspuff.de)

Cat-back system – £1837

**Evolve** – [www.evolveautomotive.com](http://www.evolveautomotive.com)

Full exhaust system, Evolve rear E-Tronic – £2640

Evolve X-pipe, primary cat delete, 200-cell secondary sports cats – £1800

Primary cat delete/test pipes – £336

**Gintini** – [www.gintani.com](http://www.gintani.com)

Cat-back system – £1250

X-pipes with primary and secondary cat delete – £1252

**Gruppe M** – [www.gruppem.co.jp](http://www.gruppem.co.jp)

Cat-back system – £2604

**Hartge** – [www.hartge.de](http://www.hartge.de)

Cat-back system – £2243

**KKS Performance** – [www.kks-performance.com](http://www.kks-performance.com)

Cat-back system – £2082

Cat-back system with active valves – £3126

**Milltek** – [www.millteksport.com](http://www.millteksport.com)

Cat-back system – from £980

**M Style** – [www.mstyle.co.uk](http://www.mstyle.co.uk)

Cat-back system – £495

Cat-back system in titanium – £1995

Lightweight cat-back system – £845

Full system with primary cat delete, 200-cell secondary sports cats – £1495

**Remus** – [www.remusuk.com](http://www.remusuk.com)

Cat-back system – £730

**Scorpion** – [www.scorpionexhaust.co.uk](http://www.scorpionexhaust.co.uk)

Cat-back system – £719

**Supersprint** – [www.supersprint.com](http://www.supersprint.com)

Cat-back system – £1543

X-pipes, primary and secondary delete kit – £1278

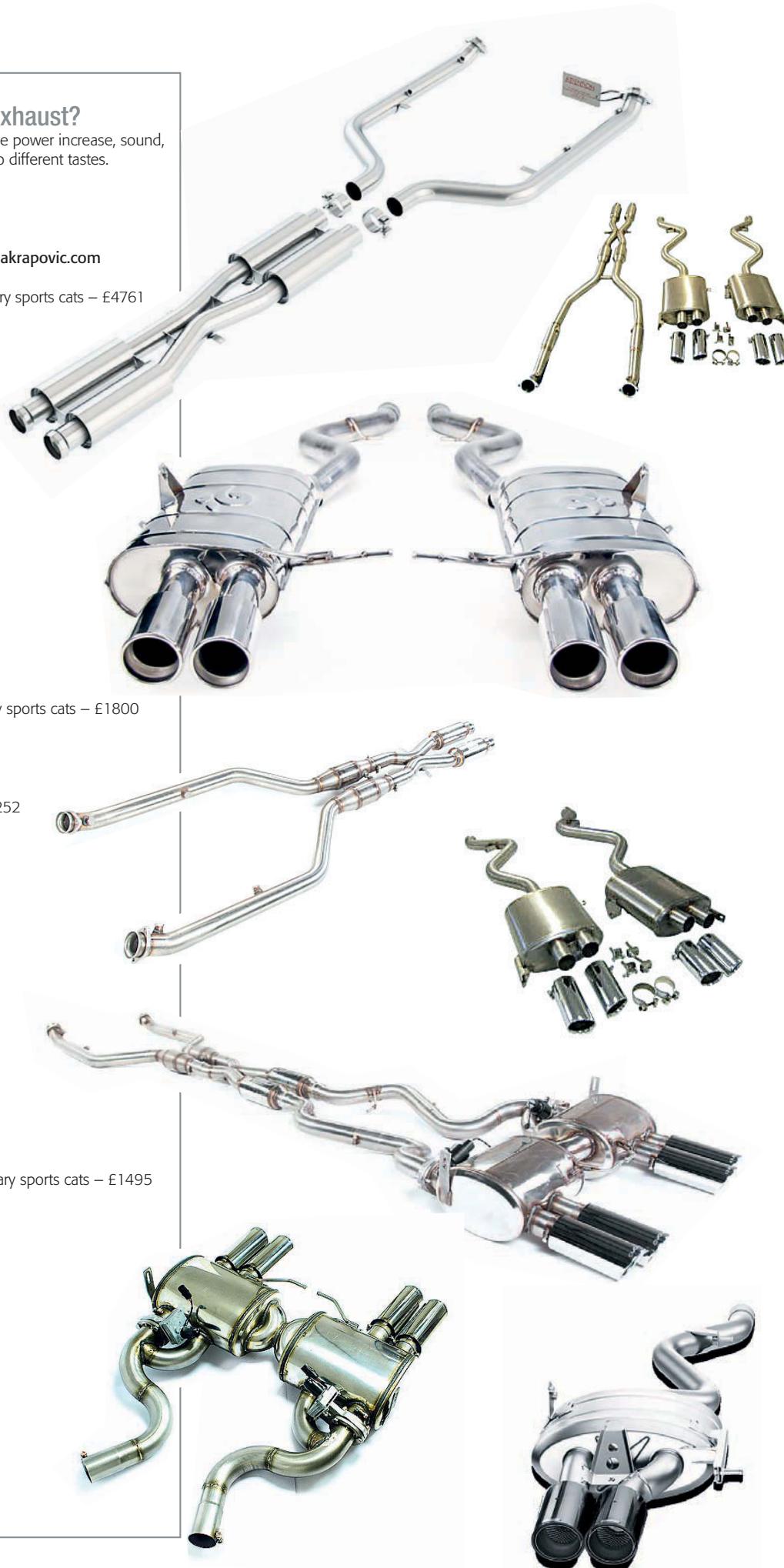
**Tubi Style** – [www.tubistyle.it](http://www.tubistyle.it)

Cat-back system – £2157

**Turner Motorsport** – [www.turnermotorsport.com](http://www.turnermotorsport.com)

Primary cat delete pipes – £249

Black chrome tailpipes – £268



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# LONGTERMERS

Another busy month for the fleet with the M5 and 320d requiring some dealership fettling. And the editor goes mad and buys an M635CSi...

## E24 M635CSi

If you read my farewell to the E34 M5 in last month's issue you could be forgiven for thinking that the last thing I was going to do once the E34 had departed was to sink a whole load of money that I don't really have into another classic BMW. As you can see from the accompanying pictures that's exactly what I've done! I really shouldn't be let out on my own or be allowed unsupervised access to the internet...

Long time readers will know that I absolutely love the E24 6 Series and once the proceeds of the M5's sale were burning a hole in my bank account I couldn't help but have a little surf to see how much a 635CSi was going for these days. Safe to say that the bottom end of the 6 Series market is fraught with danger – there are plenty of machines out there that *look* pretty decent in the pictures but are actually complete and utter hounds. Hidden somewhere in this pack of dogs is the occasional gem but these are the ones that sell within a few hours of being advertised and I kept arriving far too late to secure a purchase. And at the back of my mind there was a nagging doubt that I simply wouldn't be happy with a 635CSi.

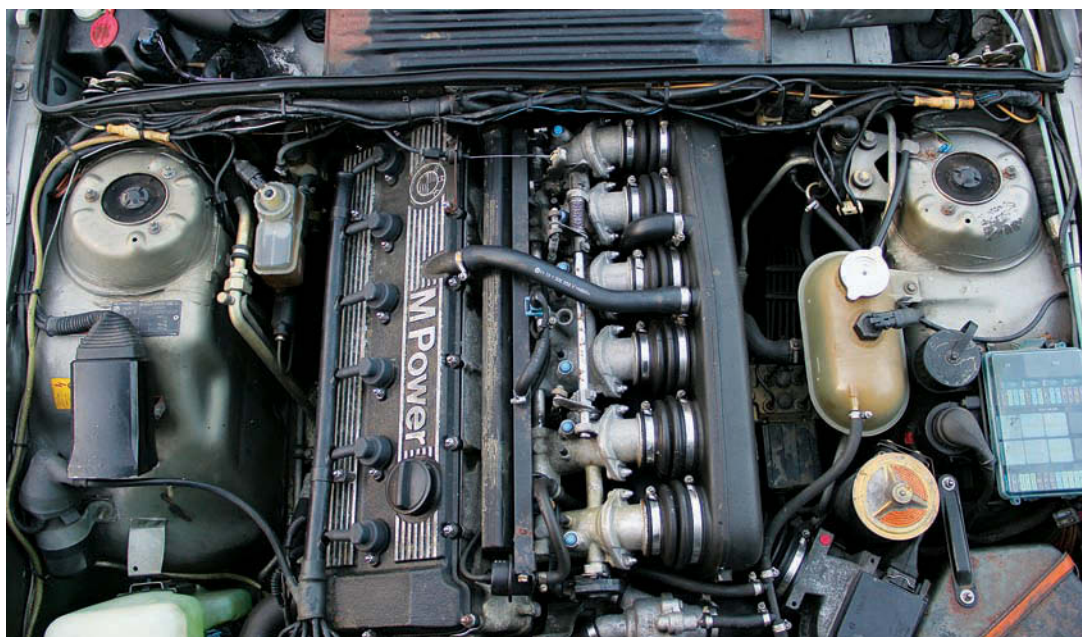
My past history includes a 1983 635CSi that had been unusually

spec'd with pukka Recaro seats, a dogleg 'box and a limited-slip differential and once I had finished removing all the tin worm and attending to a few mechanical maladies it really was an absolute peach. This rather fine machine was exchanged for what was, in essence, a rather ropey M635CSi and having sampled them both in the past I knew that if I were to purchase even a good 635 the call of the M88 twin-cam in the M car would always be too strong to resist. So I put the idea of buying a Six on the back burner – much to Mrs H's satisfaction.

And then somehow I found myself on a train heading for Coventry to look at an M635CSi that I'd spotted on eBay. The mileage was high, but it looked pretty good in the pictures... Against it was the fact that it was a Highline and I actually prefer the look of the earlier chrome bumper machines but it was Lachs silver (like my previous M6) and had the added bonus of a fairly recent timing chain replacement which needs doing every 100k miles in these. The guy selling it was nice too...

So a deal was struck, we visited the bank for some complicated transferral of monies, I added it to my insurance and headed off down the M1! Truth be told I was sold from the moment





he opened the lock-up but the initial road test sealed the deal as it did drive very nicely indeed. Fearing the worst I set off with a full tank of super unleaded cursing that I hadn't had a chance to transfer my RAC cover over to the 'Six. I needn't have worried though as the M ran like clockwork down to Sevenoaks with the sonorous straight-six making itself heard over the radio as I experimented with how much performance was still on offer.

It's obviously not modern day fast but it still seems like it retains the vast majority of its 286hp.

BMW made just 524 right-hand drive M635CSis between March 1984 and February 1989 and of that number just 102 were the later Highline model that I've just invested my children's university fund in to. My car was built in September 1988 and like many of these cars was used extensively by its first owners who

added the vast majority of the 161,000 miles that it has covered. Old MoTs reveal that it's generally covered around a 1000 miles a year for the past five years which I'm hoping is enough to have kept everything in decent working order.


It's not perfect of course, they never are once they've done this many miles, but it seems to be fairly free of any life-threatening corrosion and apart from a slight tendency to run hot

in traffic, mechanically it seems spot on. The headlamp wash doesn't work – do they ever? – and neither do the headlamp height adjusters or the air-con but everything else seems to function as it's meant to. The interior in particular is in pretty fine order and bar a slightly creaky driver's seat there doesn't seem to be a huge amount that needs doing in there.

At some point someone has replaced the standard exhaust with the monstrosity that's now poking out from the rear valance – if they had opted for a twin-pipe exit it wouldn't have been nearly so bad as the system itself is quite tuneful but to my mind it's a complete eyesore and needs replacing.

It'll be off to BM Sport shortly for a good going over with a fine tooth comb and hopefully the verdict won't be that it's a complete and utter hound! Fingers crossed.

*Bob Harper*



**E24 M635CSi**

**YEAR:** 1988

**MILEAGE THIS MONTH:** 261

**TOTAL MILEAGE:** 161,124

**MPG THIS MONTH:** 21.4

**TOTAL COST:** My wife reads this!



## F10 M5

I finally managed to get the M5 back in to BMW Swindon this month for the team there to have a look at a few of the niggles that were irritating me. Knowing that sorting out little problems often takes quite a long time, I dropped the car off for an overnight stay.

The biggest irritation was the wheel wobble I mentioned last month. I thought that this was just down to a problem balancing the tyres on the very large rims but it turns out that the problem was actually with the wheels themselves. After a full diagnostic program, the technicians determined that the gap between the wheel centres and the hub was out of spec.

As the hubs were measured to be true, BMW replaced the front alloy wheels under warranty. So, nice shiny new front wheels fitted, and problem solved, right? Not quite. The shimmy is much reduced, but still there, so further investigation is required.

The static from the radio magically stopped, but the trim team at BMW Swindon went over the interior and hunted down as many rattles as they could find. The worst culprit was a loose shroud around the rear view mirror. This had to be removed anyway, as niggles number three was that the rear view mirror was no longer dimming. A replacement was supplied under warranty.



The problem with the software not updating was investigated but BMW Swindon couldn't get the car to update either. It tried via telematics, and via USB stick, but the car would just get to 90 per cent and freeze. The company has the software on disc, and can force this to the car through their diagnostic computer, but this software is a couple of editions behind the current update, and so will still need updating again. They have done this to the M5 once before, and while it normally resolves the problem and cars can then update normally, for some reason my car is having none of it. The problem I've been having with the car dropping the iPod and iPhone connection, that prompted me to look in to the media software update, has if anything got worse lately. I have recently had days on end when the car won't play any media. A follow up visit beckons...

While they were looking after the M5, the team at BMW Swindon also performed a vehicle check. This was sent to me as a nice little two-minute video highlighting any problems with the car. As you have probably guessed, there were a couple of problems. One I was aware of, and had failed to mention, was the boot release button in the driver's footwell. It had become worn through use, and no longer had any image left on it. This was replaced under warranty. The other problem was the rear brakes. They are down to their BMW wear limits. While I wasn't particularly surprised to hear that the rear pads were due for replacement, the service



computer had been suggesting that they needed doing in about 6000 miles. I was rather more surprised to learn that the rear discs were also on their last legs. The M5 is a heavy car, and you would expect it to be hard on the brakes when driven as intended, but the fronts still have 20,000 miles to go according to the computer, so I have to conclude that the electronic nanny, and a heavy right foot are to blame for this higher wear at the rear. BMW tell me that 40,000 miles from a set of rear brakes is normal for a 5 series.

It seems odd to me that the rears have worn faster than the fronts, and also strange that the discs have only lasted as long as a set of pads. I'd be interested to know if anyone else has had similar wear issues. The brakes are sadly not covered by the service inclusive pack, so I am going to have to put my hand in my pocket this time, to somewhere in the region of £800. As they have to be ordered in, I have decided to make the most of





the existing pads and discs and run them until I change on to my winter tyres in a few weeks. I am also considering upgrading the front pads to the BMW Performance items to see if they can provide more bite.

The M5 has been doing plenty of mileage this month, taking me backwards and forwards from London and down to Cornwall. To aid with surfing duties, and to save the interior from too much abuse, I splashed out and treated the M5 to a set of roof bars and a surf board holder. While a surf board will fit inside the car (just), with the rear seats folded down, it is a lot easier to roof mount. The bars were a very reasonable £176.41 and the surf kit was £54.91. The bars easily mount to the roof slots, with a simple screw and tension system. They go on and off in just a couple of minutes. They are quiet and unobtrusive, and don't seem to damage the fuel economy too much.

The surf kit comprises of four rubber feet on sliding mounts that slot in to the roof rails. Once placed where you want them, the sliders are tightened to the rails. The system provides a secure and safe way of mounting a board without damaging it. The kit even comes with some straps and eyelets to tie the boards on

with. I was impressed with the kit and would recommend it to anyone looking for a similar product. After a few days on and off the beach though, I might need to invest in some rubber mats and seat covers as the sand gets everywhere.

This hasn't been an expensive month, thanks to the Warranty and Service package, but next month looks like being a bit more painful. I will try to get the Media software sorted, the steering wobble looked at again and the rear brakes replaced while the car is having its winter boots fitted. I'm pretty interested to see what the repaired winter front wheel looks like. I haven't seen it since it was straightened and refurbished.

*David Ingram-Hill*



### F10 M5

YEAR: 2012

MILEAGE THIS MONTH: 2373

TOTAL MILEAGE: 37,329

MPG THIS MONTH: 20.6

COST THIS MONTH:

£176.41 (roof rack)

£54.91 (surf carrier)

## E84 X1 sDrive20d

Just a short update from me this month I'm afraid as not very much of note has happened in the X1 world. I have had the scratch on the offside rear door touched up though as I wasn't quite sure how far through the primer it had gone. As luck would have it, one of our neighbours had one of these Smart Repair chaps coming to fix his bumper and while the chap was working in the street I asked him to look at the door on the X1 for me. He reckoned that to eliminate the scratch altogether he would have to spray the entire door (or at least from the bottom of the window down to the door moulding) which would cost in the region of £150. This sounded a little steep and I was concerned that any difference in the shade of paint would be noticeable if it wasn't blended into the rear wing. The upshot was that for a small amount of cash he could just touch up the damage so that's what I've gone for.

The service is now due so I will get that booked in and my search for winter wheels continues without a fruitful outcome. I did mention that I thought some 3 Series wheels would fit, but I've ended up becoming so confused about offsets that I'm currently limiting my search to secondhand X1 wheels – the last thing I want to do is to shell out for a

set of wheels only to discover that once I've fitted winter tyres to them that they don't fit!

Bob did suggest going for a set of steel wheels which can be bought new quite cheaply, but then you have the problem of having to fit conventional rather than run-flat tyres and I do prefer the security of run-flats if I'm honest. They might not offer perfect ride quality but without a spare wheel I'm loath to fit normal tyres – at least if I do get a flat on the X1 I know I can continue my journey, albeit at reduced speed.

Maybe next month I will have come up with a solution... but best not hold your breath! Knowing my luck we'll be knee-deep in snow before I resolve the issue.

*Patty Harper*



### E84 X1 sDrive20d

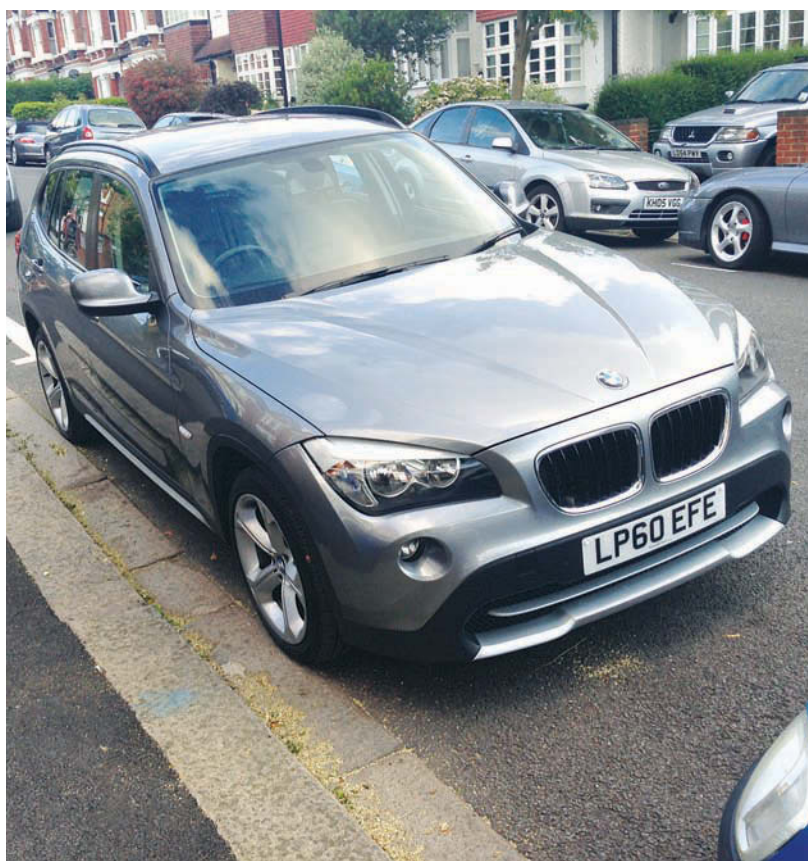
YEAR: 2011

MILEAGE THIS MONTH: 721

TOTAL MILEAGE: 36,535

MPG THIS MONTH: 36.2

COST THIS MONTH: £20



## F22 M235i

There has been plenty of weeping and wailing in the office recently as the day approaches that our wonderful M235i will be wending its way back to BMW UK. For the time being though it's still in our care and has been providing Simon and I with plenty of thrills while at the same time putting up with the normal drudgery of commuting.

No dramas or problems this month although it did ask for another litre of oil which means it seems to be consuming a litre around every 5000 miles or so. Have other owners of either M135is or M235is had a similar experience? Apart from the need for a top up the only other thing that's been getting on my nerves this month is the ground clearance between the M Performance front spoiler and the speed bumps that litter my journey to the office.

I've recently had to alter my route thanks to a particularly troublesome set of roadworks which means even more sleeping policemen to traverse and the incessant 'graunching' noise emanating from the front end of the M235i does become a little wearing. Slowing down to walking pace does

stop some of it, but in the cut and thrust of south London commuting I constantly fear I'm about to be rear ended by people who aren't expecting me to be slowing down that much for each speed bump.

On the plus side the M Performance front spoiler seems to be made of stern stuff and shows no sign of detaching itself or becoming damaged. As the centre section is a two-piece design the conclusion we've come to is that the lower layer at least must be pretty flexible, but then that does beg the question if it's malleable enough not to become damaged on speed humps does it have enough rigidity to actually provide any downforce at speed?

*Bob Harper*



## F30 320d Sport

KP12 has spent several days on a ramp over at North Oxford this month, whilst I've been cruising about in a brace of F11s. Positive outcome though. I am happy to report that the annoying knocking sound is finally fixed. The cynical among you will doubtless mumble something along the lines of "I should think so too, given the time since it was first reported..." and considering that the cause was eventually traced to nothing more abstract than a faulty steering box, you're probably correct. Anyway, I'm a philosophical sort and the car is fixed so I'm not bothered. Except the wheel still isn't straight.

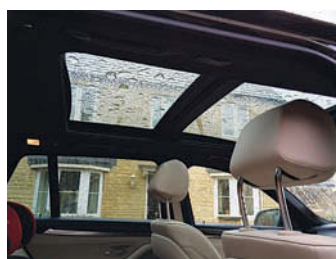
Upon receiving the car back, I drove down the road and immediately thought the wheel wasn't right. It was fractions off in all honesty, but most definitely angled towards the kerb in terms of steering attitude required to drive in a straight line. Hold the wheel 'straight' and it gradually sniffed its way across to the central line. So back on to the phone to the bemused lady running the service desk....

And that was how I ended up driving around in OY64 GVW, a lovely F11 520d M Sport in Sophisto grey with Oyster leather. And a full length panoramic sunroof which made the interior feel like a conservatory. This isn't the first F1x I've driven of course but nevertheless, initial impressions (which didn't really fade during my time with the car) were that the interior is far removed in terms of quality and ambience from that of the F30. I recall back in the '90s, driving

E36 and E34 Threes and Fives respectively and not thinking there was too much between them in terms of interior architecture and feng shui, but the difference between the Three and Five these days is quite marked in my opinion. The Fives have lovely cascading dashboards, starting off with high set recessed sat-nav screens which then flow into sizeable transmission tunnels and this combined with low-slung M Sports seats creates a very snug feeling. The instrument cluster is far more impressive and overall it's more me and yes, I want one. We actually had the chance to buy one when we purchased KP12 but were swayed by the spec and peppy nature of my current car, but the next one will definitely be a Five of some description. It won't be for a while though, but we'll come to that later.

Back to the skewed wheel then, and the North Oxford chaps had another go at it but it still came back off-centre. So at this point I drilled into exactly how they were going about fixing it, and was somewhat puzzled to learn that the KDS alignment process they were employing is a rather imprecise science. Essentially, the steering wheel is clamped straight whilst the mechanic fixes metal cages to the wheels, which in turn are then hooked up the computer and the adjustments can be made. This sounds fine unless the wheel is knocked or otherwise forced off-centre. Which has clearly happened since the column on to which the





steering wheel is fixed has splines engineered into the mechanism which prescribe the position of the wheel. If the splines match up but the wheel isn't straight, then the alignment is still off (or your chassis is twisted, but let's not go there...). It all seems a bit 1980s to me in this day and age.

So they had another go, and the F11 Tag Team rotated once more, resulting in OE14 XEU rolling up. No fancy roof this time, and an SE too, but still that lovely dashboard design and upmarket air. Aye, an F10 or F11 is on the cards, so I had a word with the affable Andy Milligan at North

Oxford, a man who sold me a new BMW years ago before the property market nabbed him and he left. He's back now though, thankfully, so listened to me moaning ("do I have to stay in this Three, Andy?" I wailed...) then he called back a few hours later and said "...yes, you do." We basically owe too much on the finance versus the car's worth, which is fair enough. There's a chance we'll be able to change next summer but here's the thing – I had expected to be otherwise told that we'd have to keep KP12 until 2017 when our four-year PCP deal matures. But apparently not. Seems we can hand the car back three-quarters of the way through the deal, providing it's in good condition and hasn't exceeded the total mileage of the deal. Which means mid 2016 it will be changed and that's more palatable. Plus it means I can stop fretting over the mileage.

The call came a day or so later to confirm that KP12 was ready for me to collect. Again. And yep, it still isn't straight. So at this point we've all resolved to have one more go at it, and if that doesn't suffice then I'll just live with it I suppose. As patient as I am, even I have to concede defeat at some point.

Regular readers will know that I've been hanging around motorbikes a lot recently, and my CBT is now completed. So I'm legal on a 125cc machine for the next two years. I'm not going to buy one though as there isn't much point given that the weather is on the turn and I'm able to rent a bike from the guys at Lightning Pass in Oxford (01865 777676) in order to get in some practice before I do my main test.

So, at a cost of £40 for an overnight rental (including all the clothing), I'll pop over there one Friday afternoon, pick up a bike and ride it home before doing the return trip the following morning. And once I've done that a few times, I'll go for my main test. No hurry though, I'm happy to potter around on a little Honda for the first year or so. Riding a bike on the road was enlightening experience incidentally. You really realise how stupid some drivers are when you're that much more exposed. Plus, roundabouts suddenly feel extremely wide. And compared to riding the bike, where one tends to flit around with minimal inertia and fewer constraints, the car later felt heavy and cumbersome in those first few miles.

One item of note from KP12's time

having its bottom exposed on North Oxford's ramps – both rear tyres are approaching their wear markers. So I'll soon have to purchase two boots from Blackcircles.com as its service is top-notch. Preliminary investigations reveal that the Bridgestone Potenza's it currently wears will cost around £350 fitted for the pair, which isn't too bad. But Continental now offer a ContiSportContact in the required size (255/35 19s) and I'm sure it didn't the last time I checked. I'd like to switch to these, but that means Potenza's on the front and CSC's on the rear. I don't like the sound of mixing tyre brands front to rear but is that an old wives' tale?

Finally this month, you may have noticed that I am now on Twitter, and you can follow me @QuentlyBentin, so to speak. Stay tuned as I'm combining my account with my YouTube channel of the same name and uploading video reviews of the cars that feature in these pages. The launch video will be uploaded soon, so please search me out, subscribe to the channel and let me know your thoughts or questions.

Mark Williams (@QuentlyBentin)



### F30 320d Sport

YEAR: 2012

MILEAGE THIS MONTH: 1160

TOTAL MILEAGE: 31,967

MPG THIS MONTH: 48.2

COST THIS MONTH: Nil

## MINI JCW GP

You may be looking at the mpg figure this month thinking it has to be a typo. It's not. I'm afraid a brush with the speed police has meant I have been driving around as if an egg has been placed under the accelerator pedal. For most of the month the economy actually sat solidly at 50.0mpg but a few Central London drives and the onslaught of winter (and the associated heated seat use) meant we finished at 48.5mpg. At any rate I now await the postman's deliveries with dread!

On more positive news I recently attended the BIG MINI Show in Staffordshire. After attending the MiTP show a couple of months ago and

bemoaning the lack of focus on BMW MINIs, this show ticked all the boxes. It was a fantastic event, helped by the unseasonably fabulous weather and the festival atmosphere created by the attendees. It was a great day out and something I will consider attending again next year. MiTP's disappointing showing of GP2 owners was totally reversed at the BIG MINI Show. There must have been over a dozen GP2s in attendance; actually eclipsing the number of GP1s this time.

It was good to see so many other GPs there and was doubly interesting to see the subtle modifications made by other owners. The least successful in my opinion related to alloy wheel changes. I just don't think there is a set of wheels out there that suit the GP2 better than the OEM equipment BMW fit from the factory – plus the four-spoke wheel design is a bit of a GP icon now. My car looked as if it was the only one that had been lowered on the factory coilovers too which was surprising.

One of the better modifications I saw on several of the GPs were natty looking build number stickers on the roof, in the correct GP font and style. After a quick chat with one of the (surprisingly young) owners I had the contact details for the sticker company and the email address for MINI UK to obtain my build number.

It turns out my car is build number 1902 of 2000 cars worldwide. Unfortunately MINI couldn't tell me what sequence my car was in the UK's 400 car allocation, nor how close to being the last GP2 registered it is – very close is my educated guess, though, given how few were left when I ordered mine.

Two days later the decals arrived and having fitted them I think they look fantastic. Plus, having a build



number on the roof helps to mark my car out as an individual rather than being one of an identical batch.

It wouldn't be cricket to attend a BMW MINI show and not buy PJ63 ZRO a little present, and I struggle to resist the allure of a good carbon fibre weave so I've shaved another 50 grams off the GP's weight by fitting a

JCW gear knob. It's a nice piece of kit and the quality of finish is exemplary. The main reason for buying it, though, was the more ergonomic shape over and above the OEM version, which never quite seems to fit in your palm snugly enough. The new shifter has more of an aeroplane's joystick shape than the rounder original with a tactile





Alcantara finger section on the back – lovely. Whilst it doesn't improve the weight of the shift action there is now a brilliant Ferrari-esque 'click-clack' noise when I change gear. I know how bizarre that sounds and I have no way of explaining it, but it's definitely there and I like it! If you have a MINI then it's £75 well spent in my book.

In terms of TLC, the front tyres I reported as being pretty much finished last month were completely destroyed by the time I got round to replacing them. I don't think I will leave it quite as late next time round.

As winter closes in it starts to re-highlight some of the positives and negatives of the car at this time of year. On the plus side the super bright bi-Xenon headlights continue to impress at night and the heated seats equally so on cold early morning starts. The lack of rear wiper, though, is starting to irritate again. I'm tempted to not wash the back window at all and see just how thick a crust of salt and dirt I can create, certainly enough to cancel out the gear knob's weight saving I would think.

I've pretty much tucked the 6 Series up for the winter now. After a thorough clean, two coats of hard-

wearing Collinite wax and connection to a battery trickle charger, she now sits under a cosy indoor car cover in the garage (see pic). I'm hoping to sneak in a couple more drives this year if the roads stay salt-free for any length of time, but we will have to see. In the meanwhile, I am pondering whether to put a programme of enhancements together for the car and deal with some of the imperfections she has. Although I like to see them as patina you can't help but be sucked in...

*Elliott Stiling*



### MINI JCW GP

**YEAR: 2013**

**MILEAGE THIS MONTH: 3557**

**TOTAL MILEAGE: 29,815**

**MPG THIS MONTH: 48.5**

**COST THIS MONTH:**

£75 (gear knob)

£15 (decals), £330 (two tyres)

## E82 135i

Not a lot to report on my 135i this month as I managed to somehow squeeze in a holiday to Greece into my busy work schedule. That meant the faithful 1 Series sat dormant on my drive for a good portion of the month, though after driving a Hyundai Getz hire car through the mountains of Crete, I've never wanted my 1 Series to have fitted in hand luggage more. Despite what you might think, there are some stunning driving roads in Greece. I even found my new favourite road ever; a new piece of extra wide American-style mountain road with a series of sweeping and cambered bends for a good 20 miles. Best of all, it provided 30 minutes of driving bliss as there was not one other car on it the entire time. It would have suited the 135i nicely so maybe one year I'll think of a way to take road trip out there...

Aside from that, I came home to discover that annoyingly, despite sitting idle, the 1 Series had developed another interior rattle. In fact, it was actually a re-emerging rattle that I thought I had cured once already. I haven't had time to investigate it, so for now, the stereo has just been turned up a couple of notches.

In other news I did manage to get behind the wheel of an i8 before I went away at long last, and I have to

say it's a truly stunning car. My expectations were understandably high but they were honestly blown out of the water; it's that good.

There are figures and videos being banded around on the internet I've seen suggesting an M4 or even a M135i is quicker to 100mph but out on the road, the i8 feels all together different and just as fast as any M car. There's an immense amount of mid-range torque on tap, far more than you can imagine thanks to the rarely mentioned third electric motor that provides an instant torque fill when required. It's also exceptionally pretty in person, much more so than pictures convey. At least it is from the front and side as the rear isn't quite as finely formed. Inside, it feels special – there's a sense of occasion and there's more room in the back than a Porsche 911. Considering it will do around 25 miles on pure electric it's my new practical dream car for the daily commute with some fun on weekends. If only I had the £100,000 or so...

For now, I'll make do and be happy with my 135 – if I could just fix that interior rattle...

*Simon Holmes*



### E82 135i

**YEAR: 2007**

**MILEAGE THIS MONTH: 1230**

**TOTAL MILEAGE: 67,123**

**MPG THIS MONTH: 33.2**

**COST THIS MONTH: Nil**



## E61 520d Touring

Some friends of mine recently bought a Honda, their third as it happens, because the last one never went wrong. In a couple of years they will buy another.

This month my 520d has been

beautifully Honda-esque, spending its days being loaded, driven, pushed hard on twisty roads and generally being enjoyed more than most Japanese people carriers ever will.

The only blot on the copy book was

a blown side repeater bulb. When I finally shelled out all of £2 for a new one, I was amazed how simple it was to change these. If I'd realised, I'd have just parked by another E60 and swapped bulbs (joking). I had put off

doing it as the headlamp and indicators are a pain to change, but these just pop off and on in seconds.

The service light has just come on, with oil change and inspection due within a couple of hundred miles of each other, but that should be long enough to wait until next month.

The car has spent more time than I'd like parked on the edge of London as my newspaper work has had me once again on public transport more than I'd like, but it's always welcoming to climb in after dragging bags around the underground. In fact I might even buy another one.

*Matt Richardson*



### E61 520d SE Touring

**YEAR:** 2008

**MILEAGE THIS MONTH:** 1792

**TOTAL MILEAGE:** 147,838

**MPG THIS MONTH:** 44.8

**TOTAL COST:** £2

## F20 118d Sport

The 118d has been seeing a bit more service recently and has been running around on numerous work-based errands. First, there was a three-car shoot down near Goodwood, which was decidedly wet and miserable but the 1 Series proved both adept at carrying photography equipment, acting as a camera car and also impromptu interview booth when I needed to chat with the owners out of the elements.

Then it ferried myself and *BMW Car* features editor Simon to the Cotswolds for a BMW multi-model day, where we got to drive a selection of new releases. Despite getting up absurdly early, the M25 from Kent was a mess and the M40 and A40 weren't much better, with a journey time of nearly four hours, with no less than four accidents along the way.

Getting to drive the i8 made it all better, though, and it was nothing short of spectacular; if my numbers came up on the lottery I'd struggle not to buy one. And the warm thoughts of the i8 were what I needed to keep me going on the three-hour drive home, making for a total of seven hours in the car. Simon seemed to fare well, though he did then disappear off on holiday for a week afterwards. One day off for each hour spent in the car with me? Coincidence I'm sure. And as I type the 118d will be getting ready to



spend a week enjoying the glamorous destination of Stansted airport's mid-stay car park while I jet off for some time off abroad myself.

I also managed to wash the F20 recently; I think it's been feeling jealous as it's watched my E39 540i get washed virtually every weekend during show season, without being able to enjoy a drop of water itself. So, having finished polishing up the 540i one Saturday and seeing that I had some suds left in my bucket, I quickly whizzed round the 118d and even threw on some Autoglym Aqua Wax for good measure. The hurried results weren't brilliant, but they made for a more presentable automobile. By the time you read this I will have made a decision about whether or not it's time to swap to winter wheels. The calendar says yes, but the weatherman says no. Time will tell...

*Seb de Latour*



### F20 118d Sport

**YEAR:** 2013

**MILEAGE THIS MONTH:** 1521

**TOTAL MILEAGE:** 11,768

**MPG THIS MONTH:** 49.5

**COST THIS MONTH:** Nil

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# F12 640i and 650i Convertible

The petrol engined version of BMW's stylish GT Convertible can be had for less than half what it would have cost you at a showroom two years ago, making it a bit of a bargain...

Words: Simon Holmes Photography: BMW

## History

The replacement 6 Series arrived fresh faced on UK roads just three years ago. As usual, it was an improvement on the previous model, the new car being longer, wider and lower, more powerful and better on fuel. It also weighed less than the previous Six yet it was far stiffer and therefore more dynamic. Even the roof was quicker too, taking just 19 second to retract and was operational at speeds of up to 25mph.

Only two petrol-powered models were released; the 640i that features a turbocharged 3.0-litre straight-six and the turbocharged 4.4-litre V8-powered 650i. The smaller engined car produced 320hp at 5800-6000rpm together with 332lb ft of torque at 1300-4500rpm. This gave a 0-62mph time of 5.7 seconds and a 155mph top speed, coupled with a combined mpg of 35.8.

The big V8 650i featured 407hp at 5500-6400rpm and 443lb ft of torque at 1750-4500rpm along with combined mpg of 26.4.

Both models were packed with equipment, too. Dakota leather trim complete with SunReflective technology, 18-inch alloy wheels, Xenon headlights, fully electric seats, front and rear PDC, Professional sat nav, Bluetooth, USB interface,

BMW Assist, dual zone air-con and an eight-speed automatic were all standard. The 650i also gained 19-inch wheels and some very minor exterior trim changes such as chrome kidney grilles.

The price for all this on release was £65,750 for the 640i and £73,430 for the 650i. At first, SE models were the only option but later followed the M Sport versions with an aero kit, 19-inch wheels and a sportier interior. Not long after, the ability to select a 650i SE was removed, leaving just the M Sport version although the 640i still offers the option for another £4415.

In 2012 the 650i received a power increase, taking output to 449hp and 479lb ft of torque, gains of 42hp and 36lb ft compared to the previous model. This meant it now accelerated to 62mph from rest in just 4.6 seconds. The new version also featured Auto Start-Stop and Eco Pro modes for the first time, while posting an improved 30.7mpg average and 214g/km emissions figures.

The F12 is still currently for sale although prices have risen marginally to £66,750 for the 640i and £71,165 for the 650i. An LCI update is expected early in 2015 although changes will be minor.

## Why should you buy one?

Whilst the F12 isn't exactly what you might call cheap, relatively speaking, it's still a bit of a bargain right now. Here's a good way to look at it; you're in the market for a late, current model convertible BMW. The cheapest 4 Series Convertible you can buy from BMW right now is the 420i SE, which will cost you £34,205. Or for £30,000 you can bag yourself a two-year-old 640i Convertible with all the bells, whistles and toys. Based on that, which would you choose, bearing in mind that the 6 Series cost over £65,000 when new? Of course you could argue that it's bound to suffer more depreciation, and the truth is it will drop, but more importantly it's done the most significant part of that already.



## Running costs

Maintaining and running a 6 Series Convertible that weighs nearly 2000kg with a turbocharged petrol engine is not an ideal mode of transport for an economy run. That said, it's better than you might think, as the latest BMWs are very efficient. With the 640i, careful driving should see around 35mpg on a steady run, and the 650i should only just be tailing behind and still in the 30s. But around town expect to see a mid-20s for the six-cylinder car and low 20s

for its bigger brother. Unsurprisingly, it's easily possible to get both cars into the teens though.

As noted, they also like to eat tyres and these are expensive due to their large size. Tax costs aren't too good for the early pre-2012 650i either, requiring £485 for a year. The later, more powerful, version costs a far more reasonable £285 for a year and the 640i sneaks in to a much lower bracket again, managing just £225 a year.

## What goes wrong?

There's largely good news here as you will be glad to hear that not a lot goes wrong, or at least it's too early for serious long-term issues to raise their heads. Also, BMW's standard warranty is three years long with unlimited mileage; so most cars will still have some kind of warranty left. If you buy an Approved Used BMW you get a full year's warranty that can be extended to two years if you're lucky and good at haggling. For something like a 6 Series, that would be worth doing just to be on the safe side.

The few mechanical issues that do arise tend to affect the 650i whereas the 640i seems to have an easier time. These include starter motor problems

causing a metal grinding sound on start up and a fuel pump issue that stops the car from starting, but confusingly comes up as a Drivetrain malfunction.

Other than that, so far the only reports from F12 owners stem around rather trivial things, such as the odd interior rattle or squeak, which is often down to seat mountings. These can be taken care of by a dealer, however, as a service bulletin was released regarding the issue.

Also the wheels and tyres tend to incur damage fairly easily so watch out for potholes. Software updates will cure a variety of minor electrical issues so make sure it's updated regularly. Some owners

have also reported battery drain problems, particularly if the car is left unlocked as the appropriate systems don't fully shut down.

Last of all, it's worth knowing that if the car shows slightly odd behaviour during its gear changes then resetting the self-learning system to suit your own driving style will more than likely make a difference. To do this, switch the ignition on but don't press the brake pedal and don't start the engine. Then, press the accelerator all the way down to the floor for about 25 seconds. This should clear its memory so you can then start the car and take it for a drive to learn your characteristics.

## F12 640i and 650i

**ENGINE:** Straight-six, 24-valve  
[V8, twin-turbo, 32-valve]

**CAPACITY:** 2979cc [4395cc]

**MAX POWER:** 320hp [407hp] (449)

**MAX TORQUE:** 332lb ft [443lb ft] (479)

**0-62MPH:** 5.7 seconds [5.0] (4.6)

**TOP SPEED:** 155mph

**EMISSIONS:** 185/km [249g/km] (214)

**ECONOMY:** 35.8mpg [26.4mpg] (30.7)

**PRICE NEW:** £65,680 [£73,430]

Figures in [ ] for F12 650i version.

Figures in ( ) for 2012 onwards 650i.



## How much to pay?

The 650i is the much harder car to find but prices start at £29,000. The cheapest 640i for sale we could find was a 2011 SE example but loaded with toys for £26,000. However, although that's a lot of car for the money the mileage was on the heavy side at 74,000. For just £1000-£2000 more there are several SE cars with good specifications and significantly lower mileages, which would make more sense in the long run. An Approved Used car from BMW can be had for reasonable money and start from £28,950 and you get a warranty, which makes them favourable.

If you're after an M Sport model then be prepared to pay a little more as they tend to command higher prices and are much thinner on the ground. Stand out colours also fetch a little more money and prices rise as mileages and ages fall. Look out for tasty extras worth having such as the Head-up display, Sports seats and soft-close doors.



## Verdict

If you're in the market for a stylish BMW convertible then it would be hard to ignore what the 6 Series offers on the second-hand market right now. It may cost a little more to run but the fact that it's still a current model and loaded with equipment far outweighs the downsides. The 640i is the smarter choice on paper being virtually bulletproof, cheaper to run and easier to find but that doesn't stop the 650i being the daddy of them all and later models feature performance to rival an M car with that V8 torque and soundtrack to go with it. Minor problems can occur on these bigger engined cars but simply buy one with a warranty for peace of mind. Whatever you choose, bang-for-buck the F12 is a hard combination to beat.



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## Bullet Bumph

Having read the October issue, the armoured X5 (News, page 8) caught my eye, particularly your use of the word 'bulletproof'!

As an end user of numerous armoured vehicles (especially executive ones) the word 'bulletproof' is a misnomer beloved of the media as it sounds cool. Very wrong. 'Bullet resistant' or 'armoured' is a more accurate description. Nothing is 'bulletproof' (this includes body armour) and projectiles (be it from rounds or fragmentation) will penetrate eventually! Glass (transparent armour) is still glass after all.

Armour just buys you time to 'get off the X' and

clear the danger area (obviously using run-flat tyres or you will have a very bad day!), unlike in the movies whereby a shower of sparks erupt around the vehicle with no affect, in reality you get turned into a tea bag along with the car if you just sit there and take it.

Armour is rated to a certain level and anything over that level the armour can fail. For example level B6 will defeat the AK-47 but if AP (armour piercing) rounds or a larger calibre are used then you're in trouble!

Armoured vehicles are also prohibitively heavy which massively affects handling characteristics

(especially cornering and braking distances) and, of course, speed.

I can remember driving a B7 factory-fitted 1997 BMW 750i and trying to race our 'chase car' – an E34 535i, and I couldn't keep up. Adding a tonne or two to the already heavy vehicle just killed the power.

Keep up the good work!



Mark

*Thank you for taking the time to explain that to us Mark, we would love to know what you do for a living!*





## Parts Problems

I wonder whether you might be interested in a story about BMW and its inability to supply spare parts to cars, which it has previously supplied new. I drive an eight-year-old BMW Z4M roadster. Price at purchase was around £46,000 and it has now been off the road for two weeks due to BMW being unable to supply a new handbrake lever. Unfortunately I am one of those fools who only lets a main dealer work on the car.

It appears that the much-vaunted alleged Teutonic efficiency doesn't permit any information to be supplied by the German HQ as to whether any such part is in existence; if it is, then, whether it will be supplied. The lack of this part has meant that my car is unable to pass its MoT, therefore rendering it undrivable and unsaleable, as well as playing havoc with my business.

After ten years and about £100,000 spent with BMW, this has certainly burst my bubble of being convinced that the company stands head and shoulders above its competitors in terms of customer service and efficiency.

**Rikki Orridge**

*Another parts horror story! We assume you mean an E85 Z4M and a quick check shows all Z4s used the same handbrake lever mechanisms. Perhaps sourcing one second-hand may get you out of trouble although it sounds BMW won't get off so lightly!*



## Warped Idea

In September 2012 I purchased an E92 M3 (2007). In November 2012 I kerbed one of the front wheels on the outer edge of the rim. The damage was approximately 5cm long. I had the wheel refurbished in December of 2012 by a very reputable company, in fact, they were suggested by a local BMW dealer.

Over a year passes. In January 2014 the car developed a judder at the steering wheel when braking. In March 2014 the local BMW dealer diagnosed warped brake discs and I had the discs and brake pads replaced. Three months later the judder returned and the discs were replaced by the dealer under their parts warranty. At the same time the two front hubs were also replaced.

Three months later the judder returns. In its investigation of this ongoing issue, BMW Technical Services asked if the wheels had been refurbished. Of course I told them of the refurbishment almost

15 months earlier and in light of this information BMW refused to replace them under its parts warranty. In the end, to resolve the problem I had to replace two alloys (220 type), brake discs and pads; a hefty bill.

In a number of emails with BMW Customer Care I have never had an explanation of why refurbishing a wheel can cause brake discs to warp. In one of its replies it advises owners not to refurbish their alloys.

I wonder if any of your readers have come across a similar problem or perhaps you have explanation of this warping trouble?

**Pat Carson**

*We have to say, that's a new one on us Pat! We've never heard of anything similar and we're not sure how it could relate to the problem. If anyone has heard of this problem before please let us know.*

## Family Fortunes

I've been driving BMWs since 1999. Well, to be truthful, until November last year. I have had an E36 M3 Coupé, an E46 328i Coupé, an E46 330i Touring, an E46 320d Touring, an E81 120d Saloon and an E90 335i Saloon. All have been magical.

Meanwhile, my son acquired an E60 Touring to accommodate his expanding family. His Ford Focus estate was not wide enough to take two of the three child seats whereas the 520d was. However, imagine his surprise when transferring the clobber from the boot he found the folded pushchair did not fit across – he had to put it in diagonally. Yes, the Focus has a wider boot than the Five. This brings me to the point of my writing. BMW appears not to focus on families. In themselves, the cars are tremendous, but why aren't they more practical?

I have subscribed to *BMW Car* for some years now and like your editor, am perplexed by the plethora of new models and variants, few of which fill obvious gaps in the range. Some appear frivolous, more like toys.

What I want is a 1 Series Touring with more space in the rear and a boot like the Focus. I don't want an X1 pram or X3. My wife would struggle to climb in, and Xs are far too bulky for me. I want a

compact car but with plenty of space. A few months ago I read the news – there's going to be a FWD 2 Series Active Tourer! Could this be the one?

Well, I just read the review in the November issue. 'Great' I thought as I turned to the article. It offers the boot space of a 3 Series Touring says the caption. No it doesn't! A significant portion of it is under the floor! The regular boot is hardly bigger than a 1 Series hatch. What's the point of sliding rear seats? It's an admission that the boot is inadequate. Here's my message to BMW: never mind the GTs, X6, M6 and all that exotica. There are plenty of cars in the range for single people and couples. Think *family*, think people who need to carry *stuff*. Don't you realise people are choosing other marques simply out of necessity?

Having got that off my chest I have been meaning to respond to your reader with 1 Series woes in the February issue whose clock picked up about two minutes a month. My 120d lost a minute or so each

month! Quite how a digital clock does this is beyond me. Not much else went wrong with the 120 over six years of ownership except an ABS unit failure which BMW replaced (except for labour) despite the car being out of warranty. Try getting that out of VW/Audi.

**Peter Aston**

*Funnily enough we were discussing how practical something like the Active Tourer actually is. We even considered testing whether it could house four adults and hand luggage. Perhaps we should that do in the future...*



*BMW Car magazine and Unity Media plc do not necessarily share the views expressed within the letters on these pages and accept no responsibility for any inaccuracies they may contain.*

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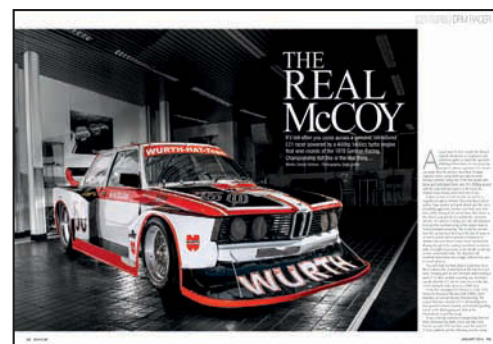
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## FROM THE ARCHIVE...

Another selection of back issues showing what we were up to five, ten and 15 years ago



allocated number of pages. There were a lot of pictures he wanted to use... and even more text, and the article became fondly known as his 'book' on the Eight.

It was a different kettle of fish with the M3 GTS, though, as BMW saw fit to announce the car's arrival by issuing a scant eight images of the car, and only two of those were overall pictures of the orange missile!

## December 2009

This month's magazine would surely be filed under the heading 'bumper issue' in the *BMW Car* filing cabinet as there was something for everyone packed within its pages.

The main cover story was the unveiling of the new M3 GTS and this meant a hastily late change to the magazine as prior to the car's sudden appearance our cover feature was due to have been our group test of the E31 8 Series celebrating 20 years of the model's existence. Deputy editor Seb de Latour was teased by the design department who had to somehow try and fit his very long article into the

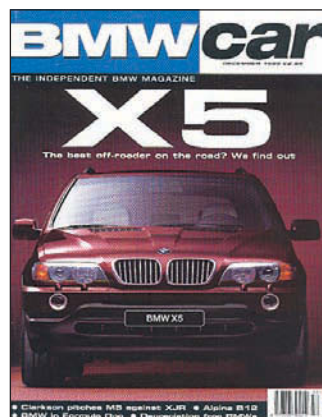


## December 2004

Wow, it hardly seems possible that just ten years ago we were announcing to the world the debut of the new fifth generation of 3 Series: the E90. As you'd expect there was plenty of marketing flannel buried within the press release – the interior, BMW reckoned, had a "generous ambience creating a feeling of controlled dynamism and lightness".

As was usual with a new model, there was a gradual drip feed of models to market and we initially only had details on the 320i, 320d and 330i models but we did conclude that there would also be a 330d model and a rumoured twin-turbo 335d. We also pronounced that we

were expecting the M3 version of the E9x generation of 3 Series to feature a V8 packing over 400hp (a prediction that was spot-on) but we were rather further away from the mark with the details when we said there would be a 330Ti model featuring a twin-turbocharged petrol engine developing in the region of 340hp. There was a twin-turbo version but it was badge 335i and had somewhat less power than we were hoping. Proof, if any were needed that the *BMW Car* crystal ball certainly has a few off days when it comes to new model predictions.



## December 1999

After what seemed like months, or possibly even years, of teasing about the new 4x4 we finally got to grips with the new X5 in this issue. That BMW was pretty confident of the vehicle's abilities was a given as it had not only laid on the expected on- and off-road driving courses for us to sample but also let journalists loose at the Road Atlanta circuit in its new baby – unheard of at the time for a big 4x4 launch. The last three words of the feature were "it can't fail" – prophetic words given how many BMW has now sold.

We also had a look behind the scenes at how BMW's preparations for the new F1 season were coming along with its partner Williams F1 under the headline 'Risky Business' where we also posed the question whether BMW was "laying itself wide open to the embarrassment of failure?" We concluded that it "may well emerge with its reputation intact and prove to have spent its money wisely". Another *BMW Car* crystal ball fail it would seem!

## BMW IN ADVERTS

This month we have another trio of adverts celebrating BMW winning on the race track

## 2001: E46 M3 GTR



A little bit of a tongue-in-cheek one by BMW North America here as while the advert might claim "the governing body in France unexpectedly changed the eligibility requirements burdening us with severe restrictions that make it impossible for us to be competitive", we'd argue that's not exactly what happened! The M3 GTR did win the GT Manufacturer, Team and Driver titles in 2001 winning the last six races in a row along the way but simply producing three road-going examples of the M3 GTR didn't really cut it with the ACO. For 2002 BMW would have had to have built and sold lots of GTRs and that simply wasn't going to happen.

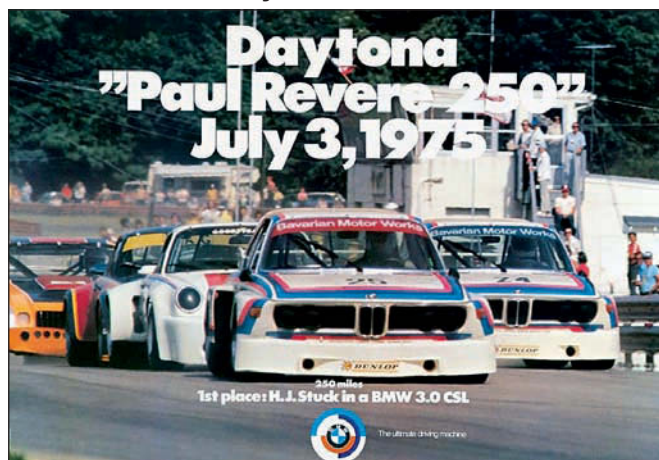
## 1990: E30 M3 Nürburgring



The E30 M3 was the world's most successful Touring Car and this advert just simply states the facts: '24-hours, 3650km, triple victory!' All three steps

of the podium were occupied by E30 M3 drivers and M3s also came home in fifth, seventh and tenth, too. All-in-all not a bad result!

## 1975: E9 CSL at Daytona



One from the days when BMW was establishing itself as a brand in the USA. Stuck won from pole but Sam Posey in the second CSL was a DNF.

At the time the cars had Bavarian Motor Works written on them as apparently most Americans thought BMW stood for 'British Motor Works'!

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**Our tame BMW technical expert, Andrew Everett, kicks off his new monthly round-up of technical titbits by looking at the sorry state of 118d differentials, failing E9x ABS units and why not to ignore the E36 Three...**

## What's that whining noise?

Smaller engined BMWs have always had an issue with whiney diffs after a bit of mileage. There are basically three diff sizes on BMWs – 168 for the small four-cylinder stuff and various 320i Sixes, 188 medium case for most others and the big 210/220 for the bigger Sixes, V8 and V12 cars, as well as M3s. The pre-2007 118d with the M47N engine has a 168 diff, and it's not strong enough. The problem is now so widespread that many BMW breakers won't sell a 118d 168 differential as they know it will be noisy or soon develop the usual whine. The 120d with virtually the same engine used the bigger 188 type unit that never goes wrong. However, it's not simply a case of fitting a 120d diff because the propshaft and the driveshafts are different. The way the prop bolts to the diff is different. The same is true for the early 118d where the propshaft bolts to the diff with four Torx bolts, E46-style.

The diff from 2007 onwards, with the transition to the N47 engine, is the 188 type medium case unit. This has a propshaft that bolts to the diff with three bolts and a rubber giubo (doughnut) coupling to match the one at the front of the prop where it meets the 'box. This adds extra cushioning to extend the life of the diff. With a ratio of 3.07, though, it will be a bit revvy compared to the 2.47 original due to the standard six-speed 'box on the later cars. Is the answer the diff, shafts and prop from a 120d? No, because these use the same 3.07 diff as the later N47 118d. The diff you need is the 2.56 ratio unit from an E90 320d. It bolts in, the ratio is close enough not to make any real difference to the drive (although it'll pull better in fifth) and you can fit

it using 120d shafts and the rear section of the prop. Breakers know what these parts are worth, though, so expect to pay £500-600 for this lot, plus fitting.

Thinking of buying a pre-2007 118d? I'd suggest you buy a 120d instead!



## E90 ABS units



In the days of the E46, BMW's engineers adapted the existing master cylinder to accept a pair of DSC (Dynamic Stability Control) sensors by providing two threaded take offs, one for the front and one for the rear brake pipe outlets. These sensors were similar to the ones BL used on Minis for brake light switches, using brake pressure to activate them. Like the Mini switches made by good old Lucas, the DSC switches on the E46 are a fairly common failure and cost around £120 each new or £20 quid used. But, at least you could replace them.

Starting with the E87 1 Series in 2004, BMW and its brake technology partners decided it would be a good idea to build the DSC sensors into the actual ABS hydraulic block in the form of valves and this system was carried over into the 2005 E90 range. The result of this is that whilst the system is very reliable statistically (face it, there are millions of these cars around), if it does go wrong the cost of repair is heart stopping. BMW realised it had an issue with the system and reduced the price of an alloy 1 Series valve block down to around £200 for the four-cylinder stuff. Due to sheer volume, you can buy a used E87 or E90 four-cylinder complete ABS block with an ECU for under a couple of hundred pounds – the actual ECU rarely fails. However, if you have a six-cylinder E90 or one of its variants and the unit fails, now may be a good time to resume smoking because the unit alone is nearly £2000 new. Used? Good luck with that – join the waiting list and expect to pay £400.

## The rise of the E36...?

I make no secret of the fact that I prefer the E36 to the E46 that came after it. I had an E46 nearly new in 2001, a 136hp 320d Touring that was a nice car. But that was 13 years ago and I bet that car now (W645GJC) is a horrid, festering wreck afflicted by some of the many E46 issues. Even in youth it needed a few warranty repairs.

The E36 is far from perfect, of course. The window regulators are crap and rust strikes on the rear arches on a regular basis but the good thing about the E36 is that it's all fixable with basic tools. If your E46 General Module fails with the car locked, you often can't unlock the car because the door lock isn't actually mechanical like an E36 one is – using the key in the lock will get you nowhere fast. Repairing it involves getting the correct GM5 module (there are dozens) and then coding it to the car – assuming, of course, that the battery in your key is any good. Add the boot floor cracks, the over-complex radiator and expansion tank setup with clip-on hoses, the rusty arches (worse than the E36), dodgy boot handle switches, faulty LF20 power steering pumps, electronic thermostats and so on, and the E46 can be a pain in the bum in old age. This is why I reckon the lighter, simpler E36 is the better old car, if you can find a really nice one that is. The number of good ones are dwindling fast. If you're looking for an E46 Coupé think again because a nice E36 328i Coupé – especially a Sport – is the smarter buy with values only going up, albeit slowly. They are looking better with age and are almost verging on classic status – next December will mark 25 years since the very first LHD saloons came off the line at Munich... how time flies.





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## Wheel alignment woes

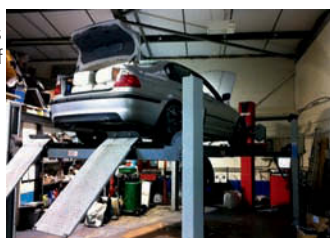
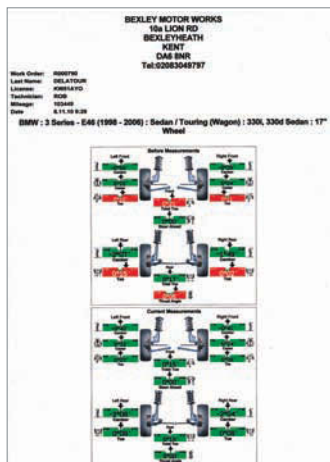
BM Sport reports that the vast majority of BMWs it has in its workshops for a wheel alignment check are considerably out from what their factory specifications should be, and that once they have had their geometry adjusted they drive a whole lot better than before. It's not just the driving experience that can be improved, though, as ensuring that your car's geometry is correct can save you a significant amount of money when it comes to tyre wear and fuel economy, too.

Over time an occasional bump through a heavy pothole or traversing speed bumps can adversely affect your car's alignment which will lead to uneven tyre wear. Bear in mind that some current BMWs can have a set of tyres that are worth up to £1000, so it makes sense to have your car's geometry checked from time to time to protect your investment. It's also worth remembering that many modern BMWs do seem to be prone to inner edge wear, especially on M Sport models with bigger wheels and tyres and having the geometry checked periodically can hopefully catch this before it becomes a major issue.

Of course if the car's suspension geometry is really far out from its factory spec then it may also have a handling imbalance that could severely impact on its ability to perform as you would expect should you need to take avoiding action to prevent an accident.

Using its state of the art Hunter four-wheel alignment system BM Sport can ensure that your BMW drives and handles like it should. And the good news is that if you book in for a wheel alignment during the months of December and January you'll receive a ten per cent discount if you quote BMWCAR10.

**Contact:** BM Sport  
**Tel:** 020 8304 9797  
**Web:** www.bmsport.com



## E46 M3 boot floor faults

There's no doubt that the E46 M3 is one of the most popular, desirable and affordable modern day M cars but increasingly as they're getting older the problem of cracked boot floors and subframe issues are raising their ugly heads. It's becoming the most major issue with the car and while the repair itself isn't hugely complicated it is very time consuming due to the amount of components that have to be removed from the car to effect a proper repair. BMW UK has been honouring warranty claims on cars up to ten years old (and that's build date, not registration date) provided they have been serviced according to its recommendations and haven't been modified. That obviously leaves a large number of M3s without any warranty and Sussex-based M Power specialist, Munich Legends, has seen a marked increase in the number of M3s it sees that are affected by this.

It says that it's vital that cars are checked thoroughly by someone that really knows what they are looking for as the first cracks that appear can be hard to spot to the untrained eye. The good news for owners is that Munich Legends is offering free checks on E46 M3s for this issue during the month of December – just book an appointment and say that you read about it in *BMW Car!*

**Contact:** Munich Legends  
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**Web:** www.munichlegends.com

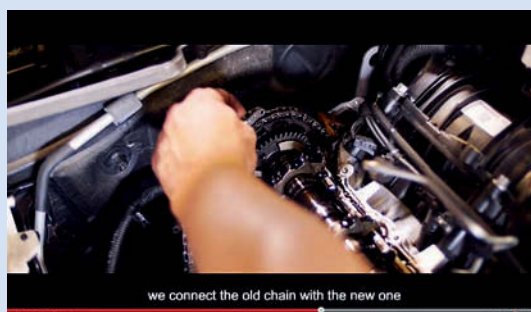
## Good timing from Schmiedmann

Danish BMW parts specialist Schmiedmann has plenty of experience with supplying parts to both trade and private customers and as a result it has a very good insight into what some of the most common repairs required these days are.

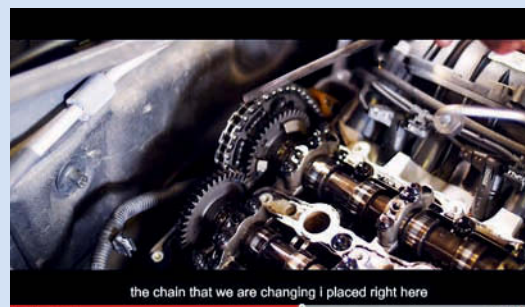
As most owners of machines equipped with N47 2.0-litre diesel engines should be aware by now the timing chain issue on these units is a bit of a ticking time bomb and effecting repairs on an engine that has a snapped chain or one that's slipped can be ruinously expensive. Which is why Schmiedmann argue prevention of the problem is the best course of action. It has put together a nice video on its YouTube channel about fitting a replacement timing chain to one of these units and while it is in Danish it has English subtitles too so you can understand what's going on! You can see that while it's a relatively involved job it's far cheaper than fitting a new engine! To watch the video Google 'Schmiedmann YouTube N47'. The good news is the parts required for the repair aren't too expensive – the Timing chain kit is £142 and the special camshaft alignment/timing tool set for N47/N47S engines is £85.



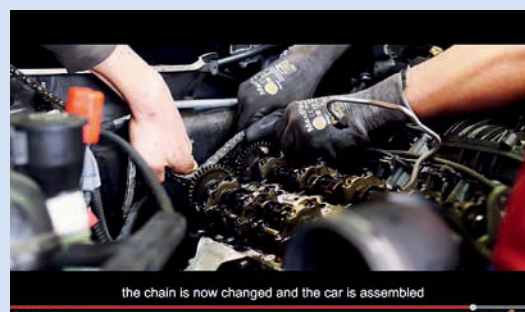
BMW 118D  
Årgang



we connect the old chain with the new one



the chain that we are changing I placed right here



the chain is now changed and the car is assembled

**Contact:** Schmiedmann  
**Tel:** +45 65941545  
**Web:** www.schmiedmann.co.uk

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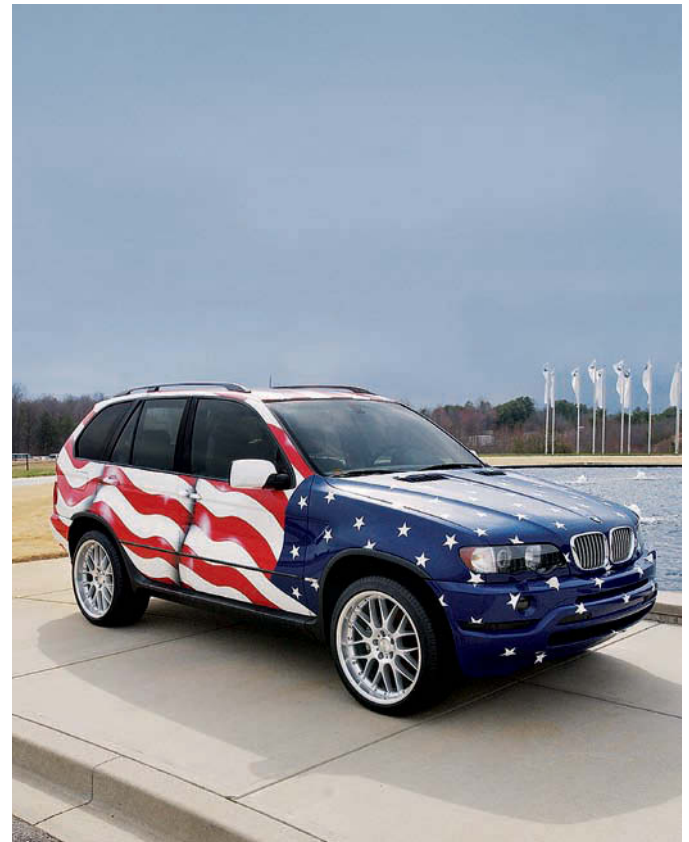
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## BMW specialist in Dartford: Crago's BMW and MINI Specialist

It's always good to hear when a specialist is doing well and Dartford-based Crago's Auto Repairs has been going from strength to strength recently.

Ritchie Crago started his BMW apprenticeship at Whitehouse Ruxley back in 1999 and he stayed working in the same group of dealerships until he left in 2009 to start his own business in a modest 1650sq ft workshop in Dartford. Fast-forward a scant five years and such was the demand for his services that he'd completely outgrown his premises.

Earlier this year Crago's opened up a new site with a 3000sq ft workshop and spacious reception area complete with all new fixtures and fittings, brand-new equipment throughout the workshop and all the space and facilities it needed to bring the independent workshop experience up to main dealer levels. It has all the latest

specialist tools and uses autologic diagnostics along with all the latest BMW software. It carries a large stock of all service items and common problem parts to get cars turned around efficiently and only uses Castrol oils and carries out all servicing to BMW requirements or above. The company isn't content to rest on its laurels, though, and the next big investment is a state-of-the-art brand-new four-wheel laser alignment system planned for the new year along with a new website, too. All bookings receive a free 20-point health check to ensure your car is safe for the road – if you're local to Dartford why not give it a try?

**Contact:** Crago's BMW and MINI Specialist

**Tel:** 01322 294404

**Web:** [www.cragoautorepairs.co.uk](http://www.cragoautorepairs.co.uk)



## Schmiedmann's Special One

Danish BMW parts specialist Schmiedmann has one of the world's largest online BMW parts catalogues but it goes so much further than just being a parts specialist and this month it has come up with a new face for the 1 Series hatch.

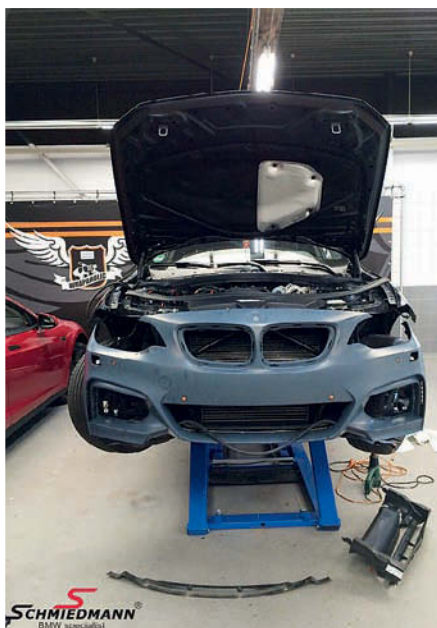
While the 1 Series is an excellent piece of kit its headlamp design does give it a slightly gawky and bug-eyed look – to our mind (and many others it would seem) – the lights at the front are simply too big for the body, which is a shame as the 2 Series Coupé has a much more pleasant visage...

The good news here is that Schmiedmann has put together a complete kit of parts required to convert your 1 Series hatch to feature a 2 Series 'face'. Amazingly the bonnet and front wings of the 1 Series and 2 Series are identical so all you need is a complete new front bumper assembly, a pair of headlights and foglights and all the associated fittings and brackets. There's no doubt the resulting 1/2 Series hatch looks far more sleek than the original. The parts required for Schmiedmann's F21 test fit vehicle came to around £2160 (inclusive of VAT, the primed bumper also requires painting) but when you bear in mind this car is equipped with xenons (the pair of lamps cost over £1000) it would be cheaper on a car not equipped with these lights.

**Contact:** Schmiedmann

**Tel:** +45 65941545

**Web:** [www.schmiedmann.co.uk](http://www.schmiedmann.co.uk)



## 4 Star's new home

Classic car specialist 4 Star Classics has a bit of a penchant for a Bavarian beauty and having outgrown its previous premises has now relocated its impressive retro-themed showrooms. It's not gone too far, though, moving from Bramley in Surrey to Kingsley in Hampshire. One advantage this new site has is that its sales, preparation and storage facilities are now all located together. We wish the 4 Star team every success in their new home.

**Contact:** 4Star Classics

**Tel:** 01420 479909

**Web:** [www.4starclassics.com](http://www.4starclassics.com)



# Next Month

Gorgeous 2000CS under the spotlight



## Plus

• AC Schnitzer's 435i Gran Coupé • The Observer BMW Coupé • Litchfield Motor's stunning M4 Coupé • BMW M Performance accessory fleet • What's in your Garage?

January 2015 issue in the shops 18 December  
and available to download 15 December

(Contents subject to change)

## BMW CONCEPTS: The cars they could have made

# xActivity

It doesn't take a genius to work out what this small, sports SAV was to become and although BMW hardly made a secret of it, it was still a little different...



It's an X3, but not quite as we know it. The xActivity showcased BMW's frame-structure convertible design that did away with the roof panel, which we actually quite like the idea of

It's hard to believe that the mid-sized X3 is now ten years old but, although it might well look a lot like it, what we have here isn't technically an X3. This is the xActivity concept car that was showcased at the Detroit motorshow back in 2003, just before the X3 was released. It was unveiled as offering an insight into the design ideas of future SAV models but, in reality, it was a slightly quirkier and more stylish version of the X3 that was imminently due.

It looked a lot like a baby X5, but then it was supposed to. The proportions weren't quite as well balanced as its big brother whose larger shape catered to the slab-sided design better but it still encompassed those bulging wheel arches. The front end was also a lot less aggressive but the rear end was very similar in its design.

It was powered by the trusty 3.0-litre straight-six diesel and it came connected to an early version of

xDrive but aside from the obvious similarities, there was one major difference: the roof. The xActivity featured what BMW called a 'frame-structure convertible', which essentially meant the complete roof panel was missing. As to where it went, BMW failed to mention but we can only assume it tucked it away somewhere, somehow.

By removing the roof from the top of the windscreen right the way back to the bottom half of the split tailgate, it opened the car up to the elements for a light and airy feel. The B-pillars were also absent; instead the A-pillars were strengthened up and looped back to the C-pillars. The doors were frameless, too, so when all of the side glass was down (including the rear quarter glass) it created an uncluttered look.

Inside was also remarkably simple in design with a relatively bare dashboard finished in a somewhat questionable colour combination. There was the usual

sat nav and what looked to be a very strange extended version of an iDrive controller. The seats were also something different as they featured pressure sensitive internals that adapted to the passenger's shape and size without needing to be adjusted. They moulded into position to support you and then kept their shape, which we can't help thinking would have been an odd sensation. Other clever features included the tailgate that folded down to reveal a boot floor that slid outwards in order to make loading and unloading much easier.

Looking back on previous concepts an open air SAV seems to be something that intrigues BMW and this is by far the most sensible offering we have seen. It's a bit of a shame the company missed out that roof when it came to the X3 as the xActivity's open plan, roof down look actually really suited the car and a panoramic sunroof isn't quite the same... ●

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